

An  
HYDROGRAPHICAL JOURNAL  
of a  
*Cursory Survey*  
of the  
COASTS and ISLANDS  
in the  
BAY of BENGAL

by  
Capt. *John Ritchie*

1770 and 1771

Published from the MS. at the Charge of The East-India Company.

by

*Dalrymple.*

L O N D O N:

Printed by GEORGE BIGG, 1784.



AN  
HYDROGRAPHICAL JOURNAL  
OF A  
CARTOGRAPHIC SURVEY  
OF THE  
COASTS AND ISLANDS  
OF THE  
BAY OF BENGAL

Jos. Banks

PRINTED BY THE GOVERNMENT OF INDIA, CALCUTTA.

BY

LONDON:  
GEORGE ALLEN & UNWIN



ALL the pieces, in my possession, of the *Coasts* of CHITTAGONG, ARRACAN and AVA are now engraven: I was particularly induced to do this, from the very great differences in the several Charts, and I perceived that *every one* contained something omitted in the *others*.

It is very remarkable that in Capt. *Ritchie's* CHARTS, at the *India-House*, as well as in that received from my Friend Major *Rennell*, The *Coast* of *Kuttubdea* seems to be taken, *not* from Capt. *Plaised's* SURVEY in 1761, but from an earlier *Sketch*: I have assigned the date 1760 to this *Sketch*, as it was received in England in 1761; I have inserted *it* in a Compartment of Capt. *Plaised's* SURVEY.

I think it will be obvious, on a View of the *various Charts* of the *Coast* of *Chittagong*, that it is, by *no means*, sufficiently known for Ships to approach *It*, without danger, from the Sea, by following Capt. *Plaised's* Instructions; but, on the contrary, that there are *many dangers* in the *Offing*, and perhaps also near the *Coast*, not described with sufficient precision for the security of Navigation.

I therefore think the greatest caution necessary for every Ship intending to cross the *Bay* in a higher Latitude than  $21^{\circ}$  N until the whole is well and carefully examined;



mined ; and the *Shoals*, seen in the *Dunbarton* 1740 and the *Victoria* 1759, accurately laid down ; for altho' there is, in a higher Latitude, sufficient depth of water, for any Ship, and much more convenient depth for anchoring, yet those *dangers* are formidable objections.

It is a consideration of the utmost importance to have the *proper Latitude* for crossing the *Bay* ascertained : I shall for this purpose draw out a *Table* of the different Ships, which have passed in the *NE Monsoon*, denoting the number of days, from *Cheduba* to *Balafore Road*, and the *Latitude*, in which they passed the *different degrees of Longitude* from *Point Palmiras*: But *this* is a *work* more properly relative to a *Chart*, now in great forwardness, of the *BAY OF BENGAL*.

The printed pieces which compose this Collection, are

Capt. *Ritchie's* Journal of a cursory *Survey* of the *BAY OF BENGAL* with  
An Introductory *Memoir* of a proposed *SURVEY* of the *Coast* of *CHOROMANDEL*.

Capt. *Hayter's* Instructions for the *West Coast* of *AVA* and *ARRACAN*,  
with notes by Capt. *Alves*

Capt. *Alves's* Journal of the *Victoria* on those *Coasts*.

Pilot *Alexander Wood's* *Memoir* of those *Coasts*

Capt. *Plaisted's* Instructions for the *Coast* of *Chittagong*.

Capt. *Ritchie's* Instructions for *Chittagong River*

March 1,  
1785.

*Dalrymple.*



1844

COLLECTION OF NAUTICAL PAPERS

concerning the

BAY of BENGAL

Published at the charge of the EAST-INDIA-COMPANY from the MSS.

by

*Dalrymple.*

L O N D O N:

Printed by GEORGE BIGG, 1785.

*Jos. Banks*

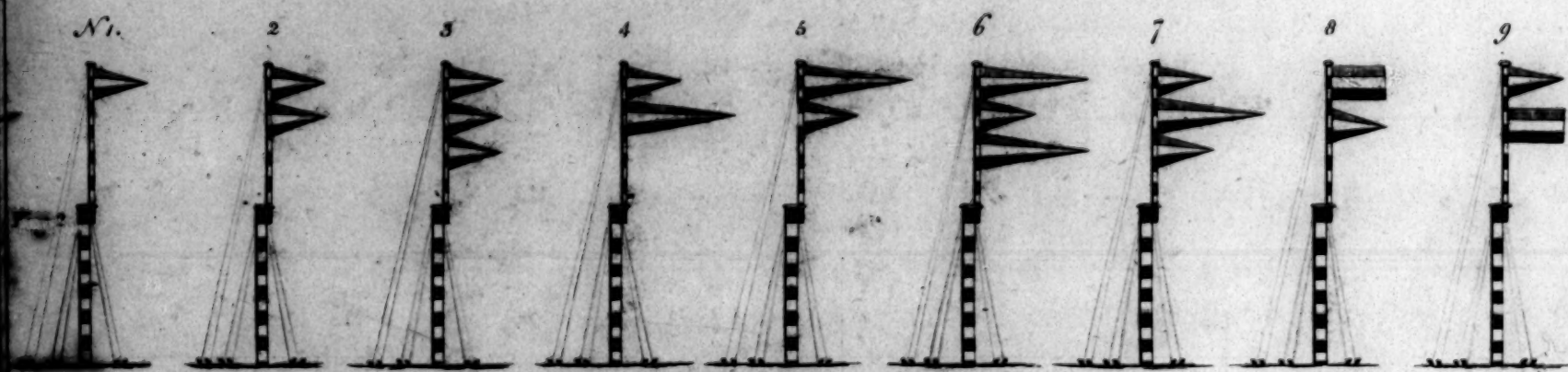
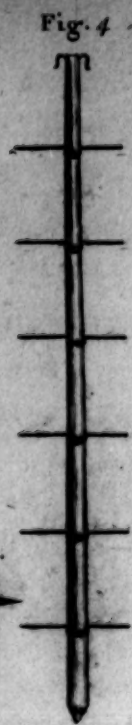
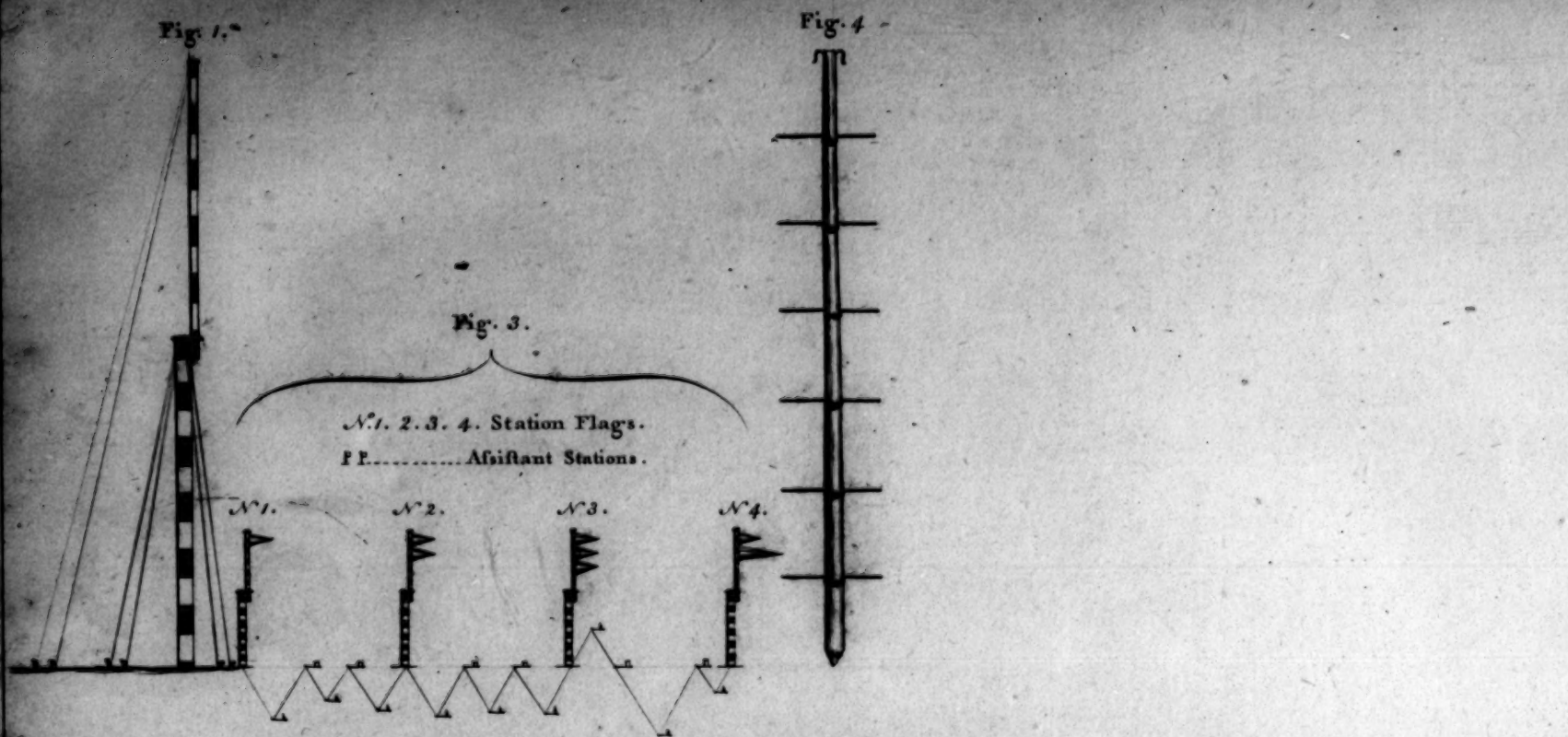
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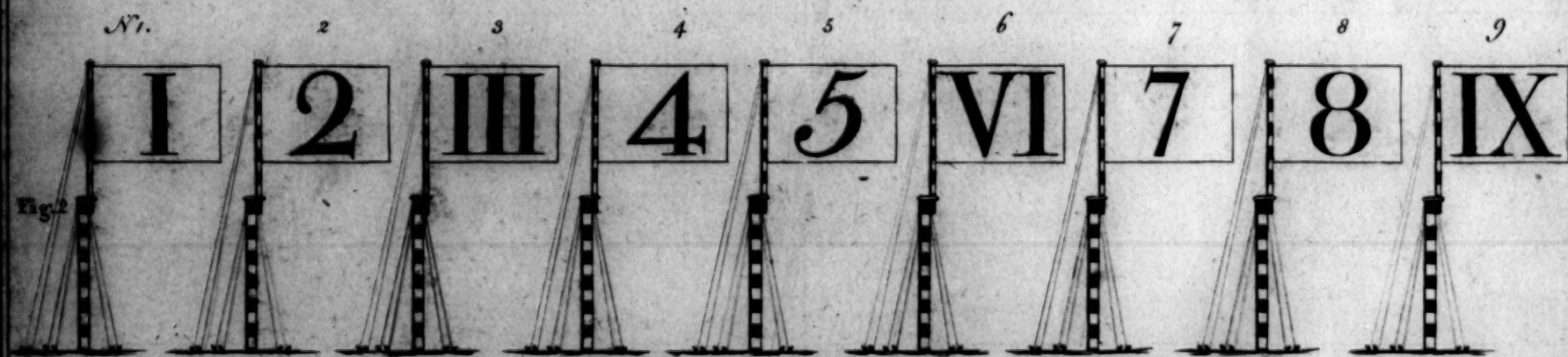
# List of Plates belonging to this Collection.

Plate	Places	By whom
1	Coast of Chittagong surveyed by	Barth. Plaisted 1761
1	Chittagong River	B. Plaisted 1764
1	Khaut Colley	B. Plaisted 1761
1	Coast of Chittagong	John Ritchie
	Sketch by	B. Plaisted 1760
1	{ Chittagong River	Herbert Sutherland
	{ Ditto	Anonymous 1764
1	{ Coast of Chittagong	Jon. Ranson 1739
	{ Ditto	Walter Hook
	{ Ditto	Anonymous
1	{ Coast of Arracan	Richard Peirce 1759
	{ Coast of Chittagong	Jeremiah Lawrance 1740
	{ Ditto	Anonymous
1	Coasts of Arracan and Ava	John Ritchie 1770
1	{ Coast of Arracan	Anonymous
	{ Coasts of Chittagong and Arracan	Herbert Sutherland 1762 and 3
1	{ Coasts of Chittagong, Arracan, and Ava	Phil. Parsons 1743-4
	{ Coast of Ava	Alex. Wood 1740
1	Coast of Arracan	William Smith 1759
1	{ Arracan River	fr. D'Anville
	{ Entrance of Arracan River	Jeremiah Lawrance 1740
1	West Coast of Ava	George Hayter 1757 and 8
1	Part of Coast of Ava	Charles Newland 1767
1	{ W. Coast of Ava	Alex. Sibbald
	{ Sketch ditto	
1	{ Negrais to Alguarda	James Gray Wragg
	{ Cocos	William Greer 1779
1	Negrais to Andaman	Alex. Sibbald about 1753
1	Negrais to Carnicobar	John Ritchie 1771
and Views Andaman and Narcondam		
1	Andamans	Ditto
1	{ W. Coast of Andaman	James Gray Wragg 1771
	{ View of Ditto	Alex. M'Cleod 1764
1	Andaman Islands	fr. Portuguese MS
1	East Coast of Andamans	H. Gough 1713
1	{ Channel to Northward of Andaman	J. Cleugh 1764
	{ Duncan's Passage	George Boswald 1759
	{ Ditto	John Ashbridge 1775
1	Nicobars 3 Inches = 1°	John Ritchie 1771
1	Ditto	Robert Lindsay 1758
1	Ditto 6 Inches = 1°	John Ritchie 1771
1	{ Part of Coast of Choromandel	Ditto
	{ Ditto	George Baker
1	{ Coast of Choromandel from Madras to False Point	John Ritchie 1771
	{ Ditto to Point Palmiras in 2 Parts	fr. Thornton
1	{ Arnegon Shoals	Black Fisherman
	{ Coringa	} John Ritchie
	{ Vizagapatam	





Signal-Flags proposed by D.



Signal-Flags proposed by Major Rennell.







## P R E F A C E.

THE East-India Company's Administration in Bengal, in the year 1770, sent Capt. John Ritchie in the *Snow Diligent*, to make a *curfory Survey* of the *Coasts* and *Islands* around the Bay of BENGAL: the Journal of this Voyage having reached England, only within these few months, is here presented to the Publick: I have given it, after his leaving the *River* of BENGAL, in the Author's *own words*, (except omitting part of the *Note* Page 85) His Notes are marked, R; I have added a few, which, to distinguish them from Capt. Ritchie's, are marked *D*.

Captain Ritchie gives a long *Note*, explaining *his mode* of *proceeding* in the *Survey*; I have placed it, as deserving especial notice, at the *End* of his *Introduction*.

Capt. Ritchie refers to *Views* of *Land*; but none came with the copy of the Journal, lately received by The East India Company; and the *only Views* in His *Charts*, long since transmitted, are of the *Island Narcondam*, and of the *Saddle* upon the ANDAMAN; both are engraven in the corner of the *Chart* of these *Islands*.

I have thought it most expedient to give Capt. Ritchie's CHARTS, without addition from other authorities; because as there is a discordancy in *Latitude*, particularly, it would have produced great confusion to have made any attempt to reconcile them. I have thought, however, that the scale of 3 Inches to 1°. (*half* of the *Original*) was sufficiently large; preferring, as he has done, rather to repeat some particular parts on a *larger scale*, than, to adopt a scale, unnecessarily large for his Observations in general; and, from its size, incommodious: Every *Sounding* expressed in the *Original* is also expressed in the Engraving. The *differences*, visible in the Charts on the different Scales, are to be found in the *Originals*.\*

It

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\* I have had recourse to *two* copies of Capt. Ritchie's *Charts*; the one, communicated by my Friend Major Rennell, being done by him, I have consequently preferred to the *Copy* at the India House: the differences are many, and some, essential. In the *names* I have followed Capt. Ritchie's Journal.



# P R E F A C E.

It would be great Injustice to Capt. Ritchie, not to bear in mind, that the Object of His Voyage was only a *curfory Survey* "introductory to a *General and accurate Survey of the whole.*"

It is to be lamented that the compleat *execution* of the *Survey*, as originally intended, has not been performed; though we may flatter ourselves, from the known disposition of Governor Hastings to promote Geographical Researches, that as the General Peace in India, has lessened his necessary attention to the great Political concerns of the State, that he will now direct it particularly to such Objects; and it is to be hoped care will be had to supply Captain Ritchie, or whoever is employed in this business, with *Chronometers*, and all good Instruments for rendering his Observations as compleat as possible: In a sea so much frequented as the *Bay of Bengal*, and where a quick Passage is often of the utmost consequence, a perfect *Knowledge* of the *Currents* is of essential importance, not only in War, but in Peace; and well deserves to have *them* determined with all possible precision, For this End it would be very proper for different Vessells supplied with Chronometers, to make the Passage in the *middle* and on the *different sides* of the *Bay*, at the same time, in different Seasons: One of these may be any Ship in the usual Course of her Navigation to and from Bengal.

This Publication is meant as a minute detail of information, for the Navigation of the *Bay of BENGAL*; I have therefore engraved several other *Charts*, in my possession, some of them, at least, appearing *more circumstantial* than those of Capt. Ritchie.

I propose to add, by way of APPENDIX, some Papers, too long to be inserted as *Notes*, and some *Extracts* of *Journals*, concerning this Navigation.

13th December,  
1784.

*Dalrymple.*

P. S. I have thought this a proper place to add a *Memoir* concerning a *Plan* for making a *Survey* of the *Choromandel Coast*.



MEMOIR concerning a SURVEY of the COAST  
of CHOROMANDEL.

THE whole Coast of *Choromandel* being now under the Government of the *English* or their Friends and Allies, It will be very proper to take the present opportunity to make a compleat Survey of It; This I think, may be effectually done, at a small expence, by one Vessel, not exceeding 50 Tons, and on shoar nothing more is required than a small party of Lascars, sufficient to carry and pitch three *Bamboe-Masts* with *Bamboe-Flag Stuffs*, painted in bands white and black (fig. 1.) with their *Flags* and *Pendants*; and one Person, without any other qualification for surveying, then being able to take an *Angle* with the *Hadley*: I do not mean to say that a greater proficiency in Surveying would be useless; but only that *This* is all absolutely requisite for the *Nautical Survey*.

The *Flags* or *Pendants* ought to be of such a size as will be visible at the requisite distance, and for lightness *Silk* would be preferable, if not too expensive: If *Flags* are used, they ought to be spread like the *Chinese*, on a light yard of split *Bamboe*: These *Signal Flags* or *Pendants* must be very distinguishable from each other and it would be proper to determine by previous Experiment, what kind and colours can be distinguished farthest.

The *Flags* should be 9 in Number and it will be proper to have a List of them with Numbers prefixed (fig. 2.) for the conveniency of marking the *Angles*, in a *Sounding Book*. The blazoned *Flags* or *Pendants* always lying open as in Admiral *Kempenfelts* *Signal Book*.



The Form of the *Sounding-Book* may be as follows:

Flags blazoned	Time H. M.	Depth fms feet	quality of ground	Cross or leading Mark	Flag of Observation	Observation of Angles observed with other Flags				Flags blazoned
N <sup>o</sup> .					N <sup>o</sup> .	R.	N <sup>o</sup> .	L.	N <sup>o</sup> .	N <sup>o</sup> .
1										6
2										7
3										8
4										9
5										

The most exact method of carrying on a Survey on Land is by equilateral Triangles, each Angle being  $60^\circ$  but as this would remove the alternate Flag to some distance from the Sea-side, and be attended with another Inconvenience in a Sea-Survey; it may be more expedient to have the Flags as near one Line as possible: and by the number *Nine*, *Three* Flags may always be kept in one line; the Flags in a Line should have one common distinguishing Vane or small Pendant over the Flags. To have the Flags in a line is a great convenience, not only in new-fixing the Flags advanced forward, but also in laying down the Soundings by the Line of Tangents, in the Manner recommended by my ingenious Friend the Reverend Mr. Mitchell, as in that case the Observation can never become ineffective by the Objects falling into a Circle, which must, *in one Point*, be the case where the Flags are in equilateral Triangles, or in any other position but a straight line. It will be proper to place the Flags by means of assistant equilateral Triangles, (fig. 3) by these assistant Stations all the Flags, where the direction of the Coast admits, might be brought into one Line very readily: and these assistant Stations may be marked out by the Person on shoar, without interfering with the operations on board; where the Vessel can approach



proach very near the Shoar, *substitute Staffs* may be requisite at these assistant Stations to afford Objects for a proper angle.

Let us now suppose the *Nine* Flags arranged at such a distance from each other, that the two extreme Flags of *Six* shall subtend an angle of  $60^{\circ}$ , at the extremity of the *Bank* of *Soundings*, if the *Flags* can be distinguished so far, or at the distance off shoar, at which the *Flags* can be distinguished.

The Vessel then makes close Traverses from the Shoar to the *extremity* of the *Bank*, constantly *Sounding*, and marking the Angles observed of at least *Three* Flags, forming with each other an angle of not less than  $30^{\circ}$ . or more than  $60^{\circ}$ .

For the greater exactness it may be expedient that the different angles be taken, at the same instant, by different Observers; for as the Vessel is constantly changing her place, unless the different Angles are taken at the same instant\*, an error may arise in the Station, inferred from these Angles.

I suppose a few days of trial will be necessary to get every thing into order, and for those on board and ashore to understand the necessary operations in concert.

Whenever the *Three* extreme Flags, on the side where the Vessel began her Traverse, become no longer of convenient use, The Vessel makes a signal for their removal

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\* I think an Instrument may be made to take two Angles by reflexion at once,



val, and the Lascars carry the Flag Staffs on, in advance, beyond the remaining *Six*, forming the same Chain they did before, their place the Person on shoar determines with a Hadley, or with a Theodolite, if that Instrument is preferred, when affixed, their Flags are again hoisted.

The removal of the Flags depending on signal from the Vessell, they will remain as long as her operations require.

I would by all means recommend that every days work, and all the Soundings, should be laid down in the Chart in the course of the day; whereby it will be seen if any thing is omitted, or mistake made, before it is too late to supply the defect.

Whenever the Vessell meets with *shoal water*, she can  $\rightarrow$ , and send a Boat to *sound* it; for it is a great convenience of the Hadley to be as well adapted for use in a Boat as in a ship.

This mode of laying down the *Soundings*, by *Signal Flags* on *Shoar*, is not competent to express them accross the Bays of *Pettapolly* and *Mazulapatam*, as the *Land* is not visible from the *extremity* of the *Bank*, and therefore no *marks* on *Shoar* can, alone, be of effectual assistance in the *Survey* of that part: But the Vessell, making Trips *off* to the *extremity* of the *Bank*, and *in* again, will have her *Traverses* corrected by the *Flags* on *Shoar*; and, with the assistance of one of *Arnold's Watches*, could not err much above a mile in the extent of her *Traverse*.

In case of meeting with any *shallow water*, out of sight of land, the Vessell must  $\rightarrow$  and send her Boat to sound, ordering the Boat to make a signal by firing; when the  
Vessell



Vessell, then setting the Boat by compass, measures the distance by *sound*: this will give the *extremities* of a *large Shoal*; the extent of a *small one* may be measured by veering away the Boat on the *lead line*; a piece of Ordnance to make a *large flash* and *loud report* may be desirable for the Boat.

The *Motion of Sound* is 1142 feet in a *second* or 2284 feet in *two seconds*; Arnold's watches have 5 beats to 2 seconds, consequently  $456\frac{8}{10}$  feet is the space answering to each beat: but, without a watch, the *Motion of Sound* may be measured by the swing of a Half-second Pendulum, made by a Bullet at the end of a thread of  $9\frac{1}{10}$  inches long, each swing will be equal to 571 feet, and counting the swings from *sight* of the Flash, or smoke issuing from the Gun, 'till the *report* is heard, you will have the distance in feet if you multiply 571 by the number of swings counted: So that with the application of the one mode or the other, every *Shoal* though out of sight of Land may be ascertained with tolerable precision\*: By the *Flags* on *Shoar*, Every *Spot* is determined with the utmost exactness, liable only to a Parallax from the Places of the *two* Observers on board, which will be but few feet separate.

It cannot be necessary to recommend to the Persons on board the Vessell, to take frequent *Views* of the *Land*, but it may be proper to mention that those *Views* should have the *angles* of the *various Objects* taken with a *Hadley*, as well as their *Altitudes* marked, which will be of use, in making a *Map* of The *Country inland*, as well as for the information of Navigators; But although it may be *useful* in making a *Map*, Angles taken from Sea, with any

B

Instrument

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\* I doubt not Balloons will become very useful as signals, moored at a great elevation by means of 3 Cords.



Instrument now made, cannot be considered as equivalent to a Geometrical Survey ; except, perhaps, when the Objects are remote and the Vessel at  $\rightarrow$ , for the same Person cannot, from *one Station afloat*, take more than *one angle exactly* with a Hadley.

Perhaps it would be eligible to leave a short trunk of Bamboe, sunk in every Place where a Flag-staff had stood, as it would facilitate the repetition of any angles which might hereafter be wanted ; and this would be attended with little trouble, and no other expence than the piece of Bamboe, which is next to nothing ; These Trunks should have the N<sup>o</sup> of the Station notched, or burnt in, upon them. The Vessel would carry a supply of Bamboes to leave in the Stations.

In case any part of the *Coast* is woody down to the Sea-Side, The Flag-Staffs must be fixed on Trees, and the angles, taken, with the Hadley, from the elevated branches of the Tree ; which I have practised where the Objects could not be seen from below : for mounting the Tree, a Bamboe Ladder, made with small sticks run through above the Joints, is the handiest. (fig. 4.)

I have here only given the outline of a commodious method of making an exact *Sea-Survey* of the COAST of CHOROMADEL in a short time, and at a small expence.

It must be obvious that the Survey cannot be carried on during the violence of the Monsoon Rains, but as those Rains do not prevail on every part of the Coast at the same time, the Vessel must regulate her proceedings, so as to avoid them by removing her station : and a Vessel of 50 Tons will have no difficulty of getting into a Place of Shelter at the breaking up of the Monsoon.

I am not sufficiently acquainted with the Seasons, in the *Northern Part* of the COAST, to determine what parts should



should be surveyed in what months: but in the vicinity of Madrafs, from the beginning of January to the beginning of October, there will not be *ten* days, in which the Survey may not be effectually continued.

I have no doubt that *this Survey* might be compleated in a Year, for supposing the Vessel only to traverse *two miles* in a day, the space from *Calymeer* to *Devy* being about  $6^{\circ}$ , is consequently equivalent to *six months* work; I allow *two months* for the Survey of *Pettapolly* and *Mazulapatam* Bays: Beyond that, the *soundings* do not extend so far off shoar, and therefore I suppose the rest of the Coast to *Ganjam*, (not  $5^{\circ}$ ) may be done, in the remaining *four months* of the year.

It can scarcely be necessary to observe, that, in the *Land-winds*, the *Traverses* must be made parallel to the Shoar, instead of *off* and *on* Shoar; and as the *Traverses* are meant to be *close*, it is of very little consequence whether the Monsoon be with the Vessel, or against it; however in case of finding the *Current*, in the *offing*, too strong for her to stem, she will find a *Counter-Current* in-shoar, with which she must get as far to windward as she would lose by the *Current*, in standing off and in again.

I think it would be eligible to have a Set of Bamboes at *Nizampatam* *Mazulapatam*, *Coringab*, and *Vizagapatam*; that in case the Vessel should be obliged to take shelter, at the breaking up of the Monsoon, in either of those Places, and have left her Bamboes, her operation may not be impeded, but having a spare *set* of *flags* on board, she may proceed with the survey from thence, till she can return to her *Station-Bamboes* that she had left, which ought to be done with the first fair wind—leaving the  
Masts



Masts standing of these, occasionally, used, or marks in their Places, that, when Her Station Bamboes are brought forward, the exact connexion may be formed.

Although I have supposed the person on shoar to be very *little proficient* in *surveying*, yet it unquestionably would be extremely desirable to have him *otherwise*, as he must have an opportunity in the execution of his necessary operations, to describe the Country to some distance from the sea-side: but I would by no means let his operations impede or retard those of the Vessell: Capt. *Wickens*, in the Corps of *Engineers* at *Madrafs*, seems to be very well qualified for that Work.

This mode of surveying by progressive Flags, is equally applicable by Land and Sea; and it would be proper, for the person on shoar, to take, from the various Stations of the Flags, the angles of every distinguishable Object *inland*, drawing the *View*, for the explanation of the *Objects*, By this the *Elements* of a *complete Map* would be established; for the Objects so determined, would afford *Data* for determining all other Objects, visible *inland* from *Them*; and These again for others: when so many points are truly fixed, the completing the *General Survey* may be done by casual passengers without expence: though it would be a great convenience if whilst the Flags are standing for the use of the Vessell, a Person were to take their angles from the most *distinguishable Places inland*.

It may deserve consideration, whether the Execution of this Plan ought not to induce the Publick to employ Astronomers to determine the length of a degree, in that Latitude; for at least  $5^{\circ}$  are easily commensurable on the *Coast* of *Choromandel*, which perhaps cannot be done in any other part of the World.

Dec. 13, 1784.

*Dalrymple.*



## INTRODUCTION.

### Advertisement.

THE Journal, which I am now about to copy, was written for my own private use, amidst a multitude of other objects which I had to attend to, in the course of a running survey of the places it mentions ; It was, therefore, a hasty performance, and no doubt will be found very scanty.

Those who read for entertainment would find but little here, knowledge was our pursuit, and that too, of a kind which can only be useful to those who may have occasion to tread the same path.

The form of the Journal is merely accidental, being no other, than the Notes for each Day, in succession, and if it is written so as to be understood, it is all that was aimed at ; for few Seamen can steer a Goose-Quill with critical nicety, or trace their way upon paper with elegant precision.

For the accuracy of the observations, however, I am answerable ; I had no doubt about it, when I registered them, and can have none now.

Some might object to the continued attention paid to the State of the Wind and Weather, as an idle repetition ; but this is a point, which Navigators of the *Bay of Bengal* ought to be informed of, at all times and places ; it is

B

like



## 2 INTRODUCTION.

like telling a Traveller, by Land, at what stage he can get the best Post Horses, and where recruit his drooping Spirits with Cakes and Ale.

Had the Snow's Log Book (the Copartner of the Journal) not been destroyed, the Journal might easily have been made more complete, by the assistance of some hundreds of remarks and observations from it, which were not entered here, but it was accidentally lost, in a bad Massoolah Boat, at Madrafs, last year, and the Journal had nearly shared the same fate.

The only help, I can give it now, will be by way of *notes* at the foot of the page, where any remark or explanation seems necessary.

JOHN RITCHIE.

*Calcutta,*  
*Sept. 6. 1783.*

Before the Journal commences, there is placed this short Note.

In this Journal, the Days begin and end at Midnight, as in the common Account; and, to avoid confusion, only *particular Bearings* are inserted.

This was meant to make a sort of reference to the Log, where any thing was wanting here.

The



## INTRODUCTION. 3

The Orders, concerning this Survey, were, "not to lose time, by entering into any *River, Bay or Inlet*, "but to keep our *Track of Soundings* as unbroken as possible; and determine the great *outline* of the *Land*, "and *position* of the *Islands*, the present Trip being only "meant as introductory to a *General and accurate Survey* "of the whole:"

"\*As the Mode of executing Marine Surveys is not "generally known *as to the Practice*, it may not be amiss "to add a short explanation here by way of Note.

"In the present Running Survey we were to be mostly "in soundings; and, in general, in no great depth of "water, 1020 fathoms was assumed as the length of a "mile of the Meridian, or Nautic Mile,  $\frac{1}{10}$  of which is "8½ fathoms the length of a Knott of our Log-line, "answering to 30 seconds by the watch or a 30" Glass. "Instead of a Log, a hand lead was used†, with *stray line* "sufficient to be three times the depth of water at least, "and to be lengthened or shortened occasionally. With "this apparatus the whole of our *Track* was regularly "measured, the time between never exceeding a quarter "of an hour, and for some purposes it was hove twice in "that

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\* The following is inserted by Captain *Ritchie* in a note.

† Capt. *Plaisted* was the first Person, that I ever heard, who used this method.



#### 4 I N T R O D U C T I O N.

“ that time. But to apply this to the purpose of ob-  
“ taining the form of the Land, and the position of re-  
“ markable objects about us, we had a very excellent  
“ Azimuth Compass suspended upon friction wheels,  
“ with a trigger stop to the Card, the Needle of which  
“ was frequently touched afresh, and every way in good  
“ order, suppose now, every remarkable object to be set  
“ with this Compass, at two different positions of the  
“ Vessel, the elapsed time being carefully noted down.  
“ We have, by this method, various parts of the Vessel’s  
“ Track, or Distance run, turned into Bases, whereby  
“ to determine the distances of the various objects as  
“ they occur ; and that too with great facility ; for the  
“ thing can be actually done faster than I can tell it,  
“ and the whole will be with equal accuracy with that  
“ which measures the Base Lines. Sometimes it was  
“ convenient to measure the Angles with Hadley’s Sex-  
“ tant, and throughout this Journal, the apparatus here  
“ spoken of, must be supposed to be constantly applied  
“ to the objects it mentions. In copying, I have added  
“ this long note purposely to shew what degree of credit  
“ may be given to the Journal, or to the *Plans* which it  
“ refers to ; and the rather, because in the accounts given  
“ by some of our late notorious Voyagers, we are obliged  
“ to *reckon without our Host* ; for whether we find them  
“ *fearified by the Doctor’s lancet*, or *weighed by the Purser’s*  
“ *steel-yard* ; still there is a great ballance to settle with  
“ other Navigators : of them, therefore, we can only say  
“ with the old song, *A Sailor Bold.*”

Snow



November, 1770.

( 5 )

*Snow Diligent* on a cursory Survey of the  
BAY of BENGAL.

F. 30. **W**INDS Northerly and variable. At 2 P M weighed anchor from *Calcutta*.

December, 1770.

Sa. 1. Moderate and hazy weather 4 P M  $\rightarrow$  at Fulta.

Su. 2. Light Northerly winds and clear weather At 4 P M  $\rightarrow$  at Culpee.

M. 3. Hazy weather throughout, At 1 P M weighed At 5 P M  $\rightarrow$  in mid channel between Gasper and Longfand

Mosque of Kidgellee NNW  $\frac{1}{4}$  W

Buoy of the broken ground W

Tu. 4. Light breezes from the Northward and calms alternately, At 7 A M weighed  $\rightarrow$  and stood down channel with the latter part of the Ebb Tide; At 8 A M  $\rightarrow$  in 5 fm. during the strength of the flood tide; At 11 A M weighed  $\rightarrow$  and stood to seawards; At 2 P M the Tide setting strong SSW found we were too near the lower bank of the Long-Sand, upon which we drop'd the B. B.  $\rightarrow$ , kedg'd clear of the Bank, and immediately hove the anchor up and stood out to seawards, with a fine breeze of wind which sprang up from the Northward.

From 6 to 7 P M we steered S. and from 7 to Midnight SSE depth of water gradually increasfing from 6 to 8 fms.

W. 5. Fresh Breezes from NNE to NE.

C

At 2 A M



December, 1770.

( 6 )

W. 5. At 2 A M finding the depth of water increased to 12 fm. we haul'd close a-wind to the Eastward making a Course good about EbS.

At Noon Lat. O  $20^{\circ}$ . 46' N. depth 50 fm. upon the same Course.

At Sun set depth 74 fm.

At Midnight ditto 65 fm.

Th. 6. First part of this day a fresh gale at NbE. the middle and latter parts more moderate.

At Noon Lat. O  $20^{\circ}$ . 46' N. the same as Yesterday consequently our Course made good must have been E. depth of water was 49 fm. At Midnight it was decreased to 42.

F. 7. Pleasant Northerly Breezes and clear weather throughout this day.

At Noon Lat O  $20^{\circ}$ . 52' N. depth of water 40 fm. part of ARACAN was seen from Mast head bearing E. (right a-head.)

At 2 P M We saw the Land from the deck in the above direction.

At 6 P M depth of water 32 fm.

At Midnight ditto 14 fm.

S. 8. Moderate and pleasant Breezes from the NW Quarter  
At 2 A M. finding the depth of water decreased to 11 fm.  $\nearrow$  with B. B.

At  $\odot$



December, 1770.

( 7 )

Sa. 8. At ☉ rise found

The S. End of the <i>White Cliffs</i> of ARACAN. (a mountainous and scraggy Land) bearing from us	} N $\frac{1}{2}$ E dist. about 4 leas. SE $\frac{1}{2}$ E our distance from
The S Extr. of the Land in sight the nearest part of the shoar 8 or 9 miles*.	

It may be necessary to remark here, that in the *track* we have come from the *End* of the *Sea-reefs*, the *most Southern* Latitude has been  $20^{\circ}. 46' N$ , and *greatest depth* of *Water* 74 fathom, and, in general, the *depth* has been *too great* for  $\rightarrow$ : therefore all ships that mean to cross the *head* of the *Bay*, should keep in the Latitude of  $21^{\circ}. N$ , or a little to the Northward of it, otherwise they may, in *Calms*, be drove out of *Soundings*; or be obliged to  $\rightarrow$ , in *too great* a *depth* of *water* to attend the *Sea* and *Land Breezes* conveniently: add to this, that the *Land* and *Sea Breezes* do not take place, *regularly*, at any considerable distance from the Shoar, any where about the *Bay* of BENGAL.

I shall remark here also, that, in the Course of this *Survey*, if any *Island*, *reef*, *Bay* or *Head-Land* &c. appear, which there is no Name for, in any *Chart* or *Plan* which I have met with, I shall take the liberty of giving names to distinguish them by, untill their proper names can be discovered.

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\* This was the very position we wished for, as our *Surveys*, of former years, had been carried thus far to the *Southward*, or rather more so. R

After



December, 1770.

( 8 )

S. 8. After due preparation to commence our *Survey*\*, we weighed  $\rightarrow$  and steered towards *St. Martin's Island*, and  $\rightarrow$  at  $\odot$  set in 10 fm. water, between that *Island* and a reef of breakers, which we call *St. Martin's reef* (see the *Plan*.)

Su. 9. Wind and Weather as yesterday. Having  $\rightarrow$  last night near a reef of Breakers. At Day Light weighed  $\rightarrow$  and worked up to the Northward, in order to round the N End of the Reef, and at the same time sent our Pinnace to sound, as near about the Breakers as possible; and, upon its return, we were informed, that there was 2 fm water close to the Breakers, on all sides, and 4 fm at a small Distance from them; we had 10 fm water between *St. Martin's Island* and the reef, with a fine soft bottom.

This Morning A ship was seen to the Southward.

At Noon another, they were both working up the Coast.

At 5 P M The Chief Mate of the first mentioned ship, came on Board of us to beg a little supply of Provisions, for they were starving, having been two Months from *Fort St. George*; It was the *Pembroke*—Moor Master,

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\* Here is inserted the Note which I have placed at the end of Capt. Ritchie's Introduction.



bound



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( 9 )

Su. 9. bound to *Calcutta*; at this time we were rounding the *North End* of the *Breakers*, under a press of sail, and had 5. 6. 7. 8. fm. variously, with a very *coarse* and *broken* bottom; the Officer of the *Pembroke* was much surprized when we shewed him the *Breakers*, for they had not observed it before.

The second ship was a large one, and she stretched to the Northward, between *St. Martin's* and the *reef*; and Tack'd, to stand off, a little after  $\odot$  sett.

At 6 P M We stood to the westward, to sound for the *Limit* of the *Bank*.

At 7 we heard the Explosion of a Gun from one of the ships\*.

At Midnight we wore, and stood towards the shoar, the *Plan* shews what *Soundings* we had.

M. 10. Pleasant Breezes from the Northward and clear weather.

At 2 A M. The depth of water being decreased to 9 fm. we  $\rightarrow$

At Day-light weighed  $\rightarrow$  and steered East untill

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\* Upon our return to *Calcutta* we were informed, that this ship was the *Middleton*, a new ship from *Pegu*, *Dennis Holland* Master, and that, in stretching off from *St. Martin's Island*, she struck upon the *reef* of *Breakers*, which we have named after the *Island*, for it seems the *reef* had not been seen from her neither, although she had got between it and the *Land* in fine clear weather; certainly it is not marked upon any *Plan* but mine. R

D

Noon



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( 10 )

Noon then S. untill 3 P M. then SE untill ☉ Sett about which time, we saw

*A small and very low Island bearing from us SWbS about 2 miles distance.*

Upon which, we came to ⚓ in 8 fm. water, the bottom *coarse grey sand*; in this situation we were nearly abreast of the *North Point of Entrance to Aracan River*, and our *Track and Soundings* for the Day was as *3<sup>d</sup> Plan*.

Tu. 11. Wind and Weather as yesterday.

At ☉ rise sent our Pinnace to the *Island*, mentioned in our last, and at the same time weighed ⚓ and stood to the westward, crossing a *broken reef*, which stretches off from the *North End* of the *Island*, and had *over falls* from 5 to 9 fm. variously, the bottom *black rocks, coarse grey Sand* with *small stones* both *white* and *black*.

When we were over the *Reef*, and got *soft ground*, we steered *South* for some time, and

At 8 A M steered SE. and

At 9 East, making a kind of circuit round 3 sides of the *Island*.

At 10 A M Our boat, which had been all round, and on shoar, upon the *Island*, returned; by which we were informed, that the *Island* is an *entire rock*, very little above the  
the



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( 11 )

the level of the sea, with only a *small patch* of *Sand* covering the *North end* of it, it is exceedingly *dangerous*, both on account of its smallness and lowness, as also for its being steep to, and far off the *Land*: I refer to the *Plan* for its situation with respect to the *Entrance* of *Aracan river*, where it will be found properly placed; and we have called it *Oyster Island*, from the multitude of that kind of shell fish which are growing to it, of which our Boat brought a considerable muster, after steering East until

Noon we steered S and SE untill

6 P M. at which time hauled off to the Westward and founded until Midnight.

W. 12. A pleasant Breeze at NNW throughout this day

By 1 o'clock this morning we had got off, to the depth of 45 fm. upon which we wore round, and stood in, towards the shoar, keeping the Wind still large\*, and continuing our traverse line of *Soundings* unbroken, the depth had decreased to 15 fm. At 8 A M.

At 9 A M We passed over a *Spit* of *hard rough ground*, which projects off from the *S end* of the *Westermofst Broken Island*, on which we had 11 fm. water, the bottom a  
very

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\* It was our practice to keep the wind alway large, if possible, in order that the Vessell's *Track* might be accurately measured and adjusted. R.



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( 12 )

*very coarse grey sand with black Specks*, when we were over the *Spit*, our Course being E, the depth increased suddenly to 14 and 15 fm. the bottom a *fine soft blue mud*.

At Noon Lat. O 19°. 39'. N.\*

In the Afternoon, we hauled up to the North Eastward, and stood in between the *Westermst* and *middle Broken Islands*, where we had very regular soundings from 13 to 15 fm. (as the *Plan* shews) with a fine soft bottom.

At 6 in the Evening, being between the abovementioned *Islands*, we bore up and steered South till 7 P M and then ↗ in 27 fm. water soft ground;

The *Broken Islands* are three in Number, they are situated at the *mouth* of *Aracan River*, or rather, they form the *East side* of the *Entrance* into it, I mean here the common *Track* into it, for it would seem that there are *passages* into the *River* at all sides, and between these *Islands*, and moreover between the *Westermst Two*, there is a very good anchorage for ships, it lies in a NNW and SSE direction: These *Islands* are mountainous woody and rugged, without any appearance of Inhabitants, or of Cultivation: and this description may serve for the whole *Coast* of ARACAN so far as we have come† The *South Ends* of the *Broken Islands*

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\* I observe that many of our Latitudes observed have not been entered in this Journal, I suppose it was occasioned by having the Log-Book alway at hand where every occurrence was inserted. R

† The *Mogs* who have often plundered the *Islands*, &c. *Sea Coast* of Bengal, are *Inhabitants* of the *Coast* of ARACAN. R



*Islands* are beset with great *black rocks*, many of which being above water make a very rugged appearance \* but These do not extend to any great distance from the *Land*, and are not *dangerous*, because they can be seen.

Th. 13. The Wind variable in the NW Quarter, and clear Weather throughout this Day.

At Day Light we weighed  $\rightarrow$  and steered to the Eastward into the *Bay* or *Bight* form'd by the *Broken Islands*.

At 10 A M bore up and steered S.

At Noon Lat O  $19^{\circ} 32'$  N.

At 4 P M, continuing the same Course, we came into a very strong *Rippling* of the water, which extended NW and SE as far as I could see from the Mast head both ways, At the same time we saw two *Clusters* of *Great Rocks* above water,

One bearing SE and in the *Rippling*,  
The other bore about S.

There was no alteration in our depth of water, which was 17 fm. untill we came into the edge of the *Rippling*.

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\* There is a remarkable *View* of these *Islands* somewhere among my papers, and also of *Cbedduba* and several other parts: R.



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( 14 )

and I had ordered the lead to be hove very briskly, it shoaled in an instant to 9 fm. with *hard ground*, and continued at this, with little variation for 5 or 6 Casts of the lead; and immediately, as we got out of the *Rippling*, it deepened to 13. 18. and 20 fm. as fast as the lead could be thrown; and here the bottom became again *soft*.

It must be observed, that I had ordered the Vessel to be steer'd SW, in order to cross the *Ripple* on the shortest distance, and obtain its width; an arm'd deep-sea-lead was also cast upon the *reef*, and it brought up *coarse brown sand*, *Shells*, and *small Stones*; when we had pass'd over this *Ridge*, (for the position &c. of which see the *Plan*) we alter'd our Course again to South untill

6 P M and then hauled off WSW to *sound* for the *limit* of the *Bank*, and

At Midnight had  $\frac{1}{100}$  fms; this shews the *bank* of *soundings* to be much narrower here, than it is to the Northward,


F. 14. Wind and weather as before

At  $\frac{1}{2}$  past Midnight we wore round and stood in shoar, steering EbN

At 1. A M had *soundings* again at 75 fm. that we might have a nearer *view* of the *rocks*\* &c. mentioned above, and

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\* Called *Clusters* in our *Plan of The Coast*. R These are, by Capt. *Newland*, called *The Terribles*, he places them in  $19^{\circ}$ .  $28'$  N; they have been seen by several Ships.

  
be



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be able to determine their position with respect to the adjacent Land, we steered E till 10 o'Clock, at which hour we altered our Course to S.

At Noon Latitude O.  $19^{\circ} 11'$  N.

At 1 P M saw part of the *Island Chedduba* bearing from us SEbS.

At 3 P M hauled in to the Eastward and

At 6 P M we  $\rightarrow$  in 17 fm. water with a fine *soft* bottom, distance off Shoar about 5 Miles

The *North End* of *Chedduba* bearing S.  $19^{\circ}$  E.  
Distance about 13 or 14 Miles.

Sa. 15. The wind at E and ENE, with cloudy weather, and some drops of rain.

At 6 A M weighed  $\rightarrow$  and steered South Eastwards, as the wind would permit ;

At 10 A M bore up, and rounded the *North end* of *Chedduba*, steering South Westerly, at about 4 miles distance from the shoar, and had no less than 13 fm. water, but with a variety of bottom, such as *black rock*, *coral rock* and *coarse grey sand* with *shells* and *small stones*, both *rotten*, and of the *pebble kind* ; there is a *large reef* of *rocks*, at this *End* of *Chedduba*, which extends into the Sea a League or more, and is *dange-*  
rous



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rous to approach in the Night, but in the *Day time*, it may be seen in good time to avoid it, for *many* of the *rocks* appear a *considerable height above water*—we had no Observation to Day, it being cloudy.

At 1 P M Saw smoke upon the *North end* of *Cbedduba*, and observed *one Spot*, where there was some little appearance of Cultivation, but we saw nothing like houses upon the Land, or boats about the Shoars\*.

Having steer'd to the Southward all the Afternoon

At 8 P M we tacked and stood to the Northward, under an easy sail, and in a short time had no ground at 100 fm. line; the *sounding Ground* must be very narrow here.

Su. 16. Wind in the Eastern Board, with light flying squalls and a gross haze all round,

From Midnight untill

6 A M we were plying to windward, in order to keep close to *Cbedduba* as we had observed a more than ordinarily strong southerly current yesterday; but when the morning cleared up, we were surprized to find, that we had been drove near 5 Leagues to the SWward; during the remainder of the day we work'd to windward, under every sail we could set, but had no Observation it being still cloudy.

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\* In 1748 The Lapwing Capt. Cheyne  $\rightarrow$  on this Coast and found *Inhabitants*. *Vide Appendix*.

  
At



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( 17 )

At 7 P M  $\rightarrow$  in 22 fm. *soft mud*, the *Flood Tide* setting strong NEbN, here there was a very heavy ground swell, setting in from the SW Quarter, which made the Vessel roll gunnel deep, and at the same time but little wind. As the *Spring-Tides* were now beginning to move, we perceived the regular effect of *Flood* and *Ebb*; but, during the *Neap-Tides*, the motion of the water was always Southerly.

M. 17. First part of this day, the wind Easterly, and light breezes, the middle and latter parts, wind varying all round the Compass, with light Squalls, and much Lightning in the Western Board.

At 5 $\frac{1}{2}$  A M weighed  $\rightarrow$  and worked to the Eastward, it being very cloudy, we had no Observation.

At 5 P M we  $\rightarrow$  in 9 fm. *soft ground*, a little before Midnight the Sky was intirely overcast, the winds light and variable, in the SW Quarter, with much Lightning, and indeed every appearance of an approaching Tempest, which is the more likely to happen, as this is new Moon Day, and three Days hence is the Winter Solstice, which will consequently fall in with the height of the Springs.

Tu. 18. Variable winds throughout, and weather as yesterday.

At 5 A M the wind coming from the Eastward, we weighed  $\rightarrow$  and stood out to Seawards.

F

At



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At 7 A M a very heavy squall passed under our Lee, at a small distance, and took to the Mountains ;\* many other squalls appeared, in the SW Quarter, during the Day, but the Northern Monsoon seem'd to get the better of them, for not one of them ever could get to the Northward of us ; In the Evening the Clouds began to disperse, and the weather to clear up and

At 7 P M, the Wind shifting about to ENE, we steered South

W. 19. Wind variable from the Northward, and cloudy and clear alternately.

At 8 A M, having a pleasant Breeze at NE, we weighed and steered ESE, towards the body of the *Island Cbedduba*

At Noon Lat O 18°. 54' N

The Northern Extreme of *Cbedduba* bearing S 78°. E dist. about 10 Miles.

At 6 P M The *same Point* of Land bore S 84° E, although we had steer'd SE from Noon, at the rate of 1½ Mile ~~per~~ Hour ; there is still a very great swell, setting in from the SW Quarter, and I have been the more particular

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\* This was a most dreadful gale of wind upon the Coast of CHOROMANDEL and many fine Ships perished in it, particularly off CEYLON, as we learned afterwards. R



December, 1770.

( 19 )

cular in remarking the changes of weather, during these last 4 Days, because I suspect that there has been a very severe gale of wind, some where in the Bay, for so heavy a sea, heaving in upon this shoar, cannot be otherwise accounted for.

*Note* About 10 Miles to the Northward of Chedduba, 12 o'Clock makes high water on full and change Days of the Moon, the Flood sets NEbN about 2 Miles  $\frac{1}{2}$  hour on the Springs; and the Ebb sets WSW about half as fast

Th. 20. Moderate weather, and variable winds throughout

At 10 Min. past 7 A M died Mr. James Wright, our second Mate, it seems he was ill before we left Calcutta, but concealed it, untill we were at Sea, for fear of preventing his voyage

During these last 24 Hours we have made very little progress, the Current is shifted, and now sets strongly to the Northward along shoar\*.

At 6 Set we were in 32 fm. water, and about 2 leagues West of Chedduba, but in standing to the South Westward  
Untill

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\* Navigators of the Bay generally assert that the Current never sets to the Northward upon this Coast, at this Season of the Year, but here is a strong proof to the contrary: the truth is, they do not go near enough to the Shoar, either to get the benefit of the Sea and Land winds, or of the changes in the Current. R



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Until 7 P M, we were surprized to find that there was no ground at 100 fathoms.

F. 21. Moderate weather, and the ground swell considerably abated.

At Noon Lat O  $18^{\circ} 35' N$

The Extremes of *Cbedduba*  $\left\{ \begin{array}{l} N 68^{\circ} 30' E \\ N 9^{\circ} 0' E \end{array} \right.$

From which, and former Observations, we find that this Island is situated between the Latitudes  $18^{\circ} 36'$  and  $18^{\circ} 50' N$ , extending NW and SE, in length about 20 Miles.

Upon approaching the Shoar, we find it intirely beset with immense masses of black rock, many of them high above water, upon which the Sea breaks continually. Upon a small spot of ground, near the South end of the Island, we saw 3 or 4 Matts, supported upon sticks fixed in the ground, by way of shed, but no houses, or any mark of Cultivation; indeed the whole *Coast* of ARACAN presents a most dreary and unhospitable Prospect from the Sea\*.

Sa. 22. Light Breezes from the SW Quarter

We find the Current still setting to the Northward, which,

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\* *Cbedduba* is inhabited, and partly cultivated for Rice, on the side next the *Main-Land*, but this part we did not see. R



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( 21 )

which, with these Winds, prevents our making any Progress

At Noon Lat O  $18^{\circ} 33' N$

The body of *Chedduba* bearing N distant 3 Miles

At 5 PM It being Calm,  $\rightarrow$  in 17 fm. water *soft ground*

Su. 23. First part cloudy, and squally all round; the middle and latter parts more settled

At 3 A M we weighed  $\rightarrow$  with a light breeze at WSW and

At 5 A M we were suddenly taken aback, we immediately clew'd up our top sails and furl'd them, and had a very hard squall from the SE, with heavy rain, which continued till 7 A M

At Noon Lat O  $18^{\circ} 32' N$

Extremes of *Chedduba* bearing  $\begin{cases} N 5^{\circ} 15' W \\ N 63. 30 W \end{cases}$  dist. of the nearest part of the Island 4 or 5 Miles

M. 24. Moderate and variable Breezes, in the SW Quarter, throughout; after taking every Advantage possible of the variable Breezes

At Noon Lat O  $18^{\circ} 29' N$

G

A



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( 22 )

a certain Proof of the small progress we make, and yet there is an absolute necessity for our working to the Southward, before we can get in towards the Shoar, for there is a *chain of small Islands* lying off the South East end of *Cbedduba*, seemingly an appendage of that *Island*, and link'd together by a *Shoal rocky reef*, upon which the Sea *breaks* very high, in several places; this *reef* we must round to the Southward, before we can go in towards the Shoar.

Tu. 25. At 5 P M, being Calm,  $\rightarrow$  in 20 fm. water *soft ground*  
Wind variable, with light airs and Calms

At Day-light this morning we sent our Pinnace on shoar upon the *Southermost Island* of the *Chain*, mentioned yesterday, which we have called *Christmas Island\**, in honor of the Day.


At 7 A M a little Breeze sprung up, and we weighed  $\rightarrow$ , and stood towards the *Island*

At 11 A M the Boat returned, and we were informed that there are *two Pools* of *fine fresh water*, upon this *little Island*, and the People brought some on board with them, as a proof of it.

This *Island* is situated SEbS from *Cbedduba*, at 13 Miles Distance, and lies in the Latitude 18°. 26' N

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\* This is called *Foul Island* by Mr. Hayter, C. Alves and Mr. Newland

  
It



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( 23 )

It is of a circular form, and its greatest width does not exceed half a League ; it is steep to, on every side, except to the Eastward, where there is a *Spit*, on which the Sea breaks ; about the middle of the *Island* there is a little *Hill*, or *hummock*, covered with Trees, one of which out-tops the rest, which makes it very remarkable.

At Noon, The wind fainting, we found it impossible to get round to the Southward of *Christmas Island*, without waiting too long for it, we therefore bore up, and steered E, with the light air we had, and crossed the reef, a little to the Northward of *Christmas Island*, upon which, however we had no less than 6 fm. water, the bottom rocks and coarse brown Sand, continuing this Course, untill

3 P M. the water deepned to 16 fm. with a soft bottom ; we then steer'd ESE till

7 P M and  $\rightarrow$  in 20 fm. soft ground.

W. 26. A pleasant gale, in the NE Quarter, during the first part, Middle and latter Parts the wind at NW, a fine breeze

At  $\odot$  rise we saw

Part of <i>Chedduba</i> bearing	- - -	N 54°. 0' W
<i>Christmas Island</i>	- - -	N 76. 0 W
The body of <i>St. Stephens</i> or <i>Foul Island</i> *	- - -	S
The Northern Extremity of the Main Land in sight N 7°. 45 E and our distance from nearest part of it about 4 Miles		

\* This is called *Tree Island* by Mr. Hayter and C. Alves ; and *False Island* by Mr. Newland.

*D*  
At



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At 6 $\frac{1}{4}$  A M weighed  $\rightarrow$  and steer'd SE till

Noon, the Depth was regularly 21 fm. and ground  
*soft,*

Lat O 18° 15' N

The Extremes of the <i>Main Land</i>	{ N 3°. 15' E
	{ S 35. 50 E
The Body of <i>Foul Island</i>	S 29. 0 W

At 1 P M We steered SW towards *Foul Island* and

At 3 $\frac{1}{4}$  P M we came within  $\frac{3}{4}$  Mile distance of *It*

This is a *high round Mountain* in the Sea, having the form of a Conoid, and totally covered with Trees. It is situated in the Latitude 18°. 6' North, and at 12 Miles distance from the *Main-Land*; we had 23 fm. water very near it, and saw no appearance of *Breakers*, or *foul ground* about it. The *Main-Land* here presents us with a triple ridge of vastly *high Mountains*\*, which appear very smooth and regular, and sloping gradually at both ends, but the slope to the Northward is the most sudden; here the *Coast* of ARACAN (properly RECKAN) ends, and the *Coast* of AVA begins.

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\* This is the Southern Extremity of the *Mog Mountains*, which separate the united Kingdoms of AVA and PEGU from ARACAN, CHITTIGONG, and TIPPERAH, all of which Places taken together, formed the *Antient Empire* of Moco. R

From



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( 25 )

From *Foul Island* we steered SE, continuing our *line of soundings*, &c. untill 8 P M, and then hauled off to the Westward

Th. 27. Light Breezes and variable, in the NW Quarter

At 2 A M we wore, and steer'd E, the depth of water decreasing regularly

At ☉ rise

The Extremes of the <i>Coast of Ava</i> bore	{ N 6°. E
	{ S 34. E
<i>Foul Island</i> - - - - -	N 36. W our distance from
	the Shoar being about 4 Miles, and depth of water 28 fm.

From 7 A M Till Noon, having very little wind, we found a strong Current setting SbW, which drove us close by a *cluster of very large rocks*, which we have named *St. Johns\**, in our Plan, it being *St. Johns Day*; These *rocks* are not marked upon any *Chart*, which I have seen, of this *Coast*.

To day Lat O 17°. 34' N

The Extremes of the <i>Shoar</i> - - -	{ N 8°. 40'. E
	{ S 18. 50. E
The <i>Rocks</i> - - - - -	S 15. 0 W at a small dist.
An opening in the <i>Land</i> like the <i>Entrance of a River</i>	N 68. 40 E
And another - - - - -	NE

\* These are called *Church Rocks* in Mr. Hayter and C. Alves Instructions.

H.

From



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( 26 )

From 1 PM to 7 PM we steered S and WSW from 7 to 8 P M

At which last hour we  $\rightarrow$ , apprehending we must be near the *Rocks*, call'd *Buffaloes*, although we had not seen *them* in the Evening.

F. 28. Winds as yesterday, whilst at  $\rightarrow$  we found a Current setting SW 2 Miles  $\frac{1}{2}$  Hour

At Day Light we weighed  $\rightarrow$  with a light breeze at NNW

At  $\odot$  rise The breeze fail'd us, and finding the Current set us directly towards the *Buffaloe Rocks*, we dropt our stream  $\rightarrow$

These *Rocks* bearing from SSE to SWbS about 1' Dist. in 31 fm. water.

The *Buffaloe Rocks*\* are in two divisions, which bear NWbW, and opposite, from one another.

The *South Eastern* Division consists of *two high rocky Islands*, covered with Trees and Bushes, they are join'd together, by a *shoal reef of rocks under water*, upon which there is a *single rock above water*, about half way between the Islands.

The *Western* Division, consists of *seven black rocks*, of different magnitudes, and of uncouth figures, *one resembles*

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\* These are called by Others, The *Calventura Rocks*; and what C. Ritchie calls the *Calventura Rocks* are called by Them, The *Buffaloes*.

  
an



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an *Old Church* with a *mutilated Spire*; another stands upon a very *small Base*, and is prodigious *bulky at top*, one would think that the next wave would beat it down into the Sea.

At 10 A M, a small Breeze having sprung up at NW, we weigh'd  $\rightarrow$ , and pass'd by the *Eastern Buffaloe Rocks*, at about  $\frac{1}{2}$  Mile distance, and between *them* and the *Shoar*, we had no less than 8 fm. water, the bottom *coarse grey sand* with *shells, small stones* and *broken Corallines*.

These *Rocks* lie in the Lat  $16^{\circ} 52'$  N distant from a *Sandy Point*, upon the *Main Land*, 4 Miles, or something more, so that there is a *fine passage* between them and the shoar.

Our Course from Noon to 3 P M was S and S  $\frac{1}{2}$  W, From 3 to 6 P M SSW, and from 6 to 7 P M SW; We find the Coast of AYA taking a direction to the *Westward of South* here, contrary to what it is represented to do, in all the *Sea Charts*, for there it is *South Easterly*.

At  $\odot$  set,

The Extremes of the *Land* bore  $\left\{ \begin{array}{l} N 30^{\circ} 30' E \\ S 5^{\circ} 0' E \end{array} \right.$

Distant off a *small Island*, call'd *Dolphin* in our Plan,  $\frac{1}{2}$  Mile; in depth of water 16 fms;

The *Land* is much broken hereabouts

At 7 P M we  $\rightarrow$  in *soft ground* 20 fm. water, we could have wish'd to stand off in the night, to measure the extent of the *sounding ground*, but these light winds and a strong southerly Current, which prevails at present, would



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would have prevented us from returning to our station, in the *Line of soundings*, by morning, which would have occasioned great delay, we were therefore obliged to stop where we were.

Sa. 29. A pleasant Breeze from the Northward

At ☉ rise weighed ⇨

The Extremes of the *Land* bearing from NE  $\frac{1}{2}$  N to SbE

At 7 A M passed by a small *Islet* in a bight of the *Land*.

At 8 A M The *Northern Cluster* of the *Calventura Rocks*\* (see the Plan) bore East; our Course, from the time we weighed, till Noon, was South

At Noon Lat O 16°. 19' N

The Extremes of the *Shoar* from N 18°. E

To *False Cape Negrais* - - S 13. E

The *Calventura Rocks* - - NE

These *last* are a *heap* of very rugged rocks, high above water, in Lat 16°. 20' N to 16°. 23' N; and lie about a league distant from the *Land*; we passed about a Mile to the westward of them, and had no less than 20 fm water, the bottom *fine soft mud*: Strangers coming from the Southward, in the *Night*, ought to be cautious how they stand in here, for the *soundings* are very regular close to these *Rocks*

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\* Called by Others, The *Buffaloes*.



From.



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From Noon until ☉ Set we steer'd S, at a small distance from the Land

And at ☉ Set

Diamond Island bore - - - S 37°. 30' E

False Cape Negrais - - - N 66. 0 E

Northern Extremity of the Land - - N 17. 30 E dist. off shoar two Miles, depth 12 fm. and bottom *stiff ground*

At 6 P M ➔ in 11 fm. bottom, *fine white sand*

Su. 30. A pleasant Northerly Breeze throughout

At 6 AM we weighed ➔ and steered S, being determined to sound round the *le Guarda Reef*, or *sunken Island*, as near as we could with safety

At Noon Lat O 15°. 44' N

False Cape Negrais bearing - - - NbE

Diamond Island - - - NE

Le Guarda (I mean the breakers on it) - - ESE dist. 2 Miles

The Reef *le Guarda*, or *sunken Island*, is situated in the Latitude 15°. 42' to 15°. 43' N by our Observations; and, what is to be seen of it, is a reef of *Rocks just above the Surface of the water*, extending NE and SW, about a Mile in length and very narrow; but the Sea *breaks* all about it to a considerable distance, in rounding the SW side of the reef, this afternoon, we observed that when the *West End* of

I

Diamond



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*Diamond Island* and *East End of Little Negrais Hill*\* were just drawing into the same Line, the *le Guarda Reef* was also in the same direction, viz NNE, at the same time the Western Extreme of *Negrais* bore N: and we had *over falls* from 19 to 30 fms. *rocky ground*. This last *remark* shews the exact position of *Sunken Island* with respect to the *Land of Negrais*, and might be of great use to ships passing this way, as by help of it they might round the *Le Guarda* very close, without fear of being drove off the *Land*, and by that means avoid going through the *race* of *Negrais*, in which there is a very *strong irregular Tide*, *Foul ground* and a *confused swell*, even in the smoothest weather. The *race* is between the *Spit of Diamond Island* and the *Le Guarda*

From 5 to 6 P M we steered ESE, from 6 to 7 E, from 7 to 8 NE; The depth of water varying from 12 to 14 fm. the bottom very *coarse grey sand* and *Coral rocks*

At 8  $\rightarrow$  in 14 fm. the ground *coarse sand*, and the Ebb Tide setting strong WSW

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\* This means the *Hill* upon the *Island* within the Entrance of *Ava River* and not *Cape Negrais*, which forms the *west point* of the *Entrance*



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M. 31. Light airs at NNE

At 6 A M weigh'd  $\rightarrow$ , and work'd up towards the Land, but made little progress, the Breeze being very faint

At Noon Lat O  $15^{\circ} 39' N$

The Le Guarda Reef bearing - - - - - WNW  $\frac{1}{2}$  N

Diamond Island - - - - - N  $8^{\circ}$  W

Point Porian i.e. the East Point of Entrance to Ava\* River N  $25^{\circ}$  E  
and depth of water 12 fm. the bottom Coarse Sand and broken Shells mixed with Corallines

Here we  $\rightarrow$  it being almost calm

At 4 P M a breeze sprung up at NNW, and we weighed  $\rightarrow$  and stretched in, at NE, towards Porian Point

At  $\odot$  Set

Diamond Island bore - - - - - N  $18^{\circ}$  W

The Little Negrals Hill - - - - - N

Point Porian - - - - - N  $24^{\circ} 30'$  E

We continued our Course till 7 P M and

At 7 P M  $\rightarrow$  in  $11\frac{1}{2}$  fm. water, the ground fair sand and small Shells; the flood Tide setting strong ESE

At 11 P M, The Tide turned and set WNW, by which we learn that the flowing here, upon full and change Days

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\* Basseen River, by some so called. R

of



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[ 32 ]

of the Moon, is between 11 and 12 o'Clock, and we observed the Tide rise in the Offing about 9 feet\*

Tu. I. Pleasant Breezes from NNW to NNE.

At Day Light we weighed anchor and stood to the Westward, and at 11 A M, being close to the Reef of *Diamond Island*, we tacked and stood to the Eastward

At Noon the Latitude O was 15°. 46' N

The body of <i>Diamond Island</i> bearing	-	-	N 46°. W dist. 3 Miles
<i>Perian Point</i>	-	-	EbN 3½ Miles
<i>Cape Negrais</i>	-	-	N 31. W
<i>Little Negrais Hill</i>	-	-	N 5. E depth of water

6 fm. and bottom soft mud

At

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\* It is difficult to account for the *small rise and fall* of the water here, compared with what is to the Eastward, near *Syriam Bar*, where it rises and falls 24 feet. By the Keplerian Law of Attraction, and the Philosophical Physical Jargon presented to us upon that principle, we are told of immense Tides in the Ocean, where the water meets with no Obstruction; accordingly *Trestan da Cunha*, *St. Paul's* and *Amsterdam* and many others so situated should have the *highest Tides* in the World (which we know is not true) so that this great Law of Attraction, comes to no more than this, The water, purely from its own density, is continually tripping to and again, upon Plains, (small portions of the Sphere) variously inclined to the common Center of Gravity of the Sun, Earth and Moon; which Plains are also constantly varying their Positions, with the rotatory Motion of the Earth. Now wherever the water meets with a sloping wedge-like bottom near the Land, we find it sliding itself up upon the flat, and rising to a great height, merely the effect of the oblique resistance it meets with, and when this resistance ballances its original velocity in the Offing, it immediately retreats. Upon bold steep shoars we find no high Tides: The Course of the Tide, which we see in many Rivers, is easily accounted for on the same principle. R



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At 1 $\frac{1}{2}$  P M came to  $\rightarrow$ , there being very little wind.

At 2 $\frac{1}{2}$  P M we weighed  $\rightarrow$ , with a fine breeze at West, (the Sea breeze) and steered in NbE, between *Diamond Island* and *Point Porian*, and here we soon found the ground very *broken* and *rocky*, with several *patches* of *breakers a-head*, and a great ground-swell all about us.

At 4 P M we wore round in 4 fm. water, and stood to the Southward, and

At 6 P M Came to, with Stream  $\rightarrow$ , in 10 fm. water, the bottom *mud* and *Sand*: here the Tide set EbN.

- W. 2. At 5 $\frac{1}{2}$  PM we weighed  $\rightarrow$ , with a light breeze from the Northward, in order to sound the *race*, or *swath*, between *Le Guarda Reef* and *that* of *Diamond Island*; in steering West we found the depth decrease suddenly, from 13 to 6 fm. and from *soft ground* to *rocky bottom*; we bore up, and steered South Easterly, and in less than five minutes had 12 fm. and *soft ground* again.

Again we hauled to the Westward, but there being little wind, were obliged to  $\rightarrow$ ; and upon sending the Pinnacle to sound, found we were in the middle of the *Race*; here the Lat. O was 15°. 45' N. and the Vessel rid exceedingly hard, there being a very heavy and confused swell in the *race*, tho' calm, occasioned by the heavy surge of the sea upon *Le Guarda Reef*, and the water being very deep just beyond it, for there are

K

no



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*no soundings*, at a small distance, South West from it. It is amazing that ships should frequent this *Passage* so much as they do, when they might so easily avoid it, by rounding the *Le Guarda Reef*, close to the Southward, where nothing of this swell is to be met with: for I must acknowledge I think the *Race of Negrais*, by no means an eligible *Passage* for strangers, nor for any one without a steady leading wind.

Being now about to leave the *Coast* of *Ava*, I have only farther to remark, that the whole of *it*, from the extremity of the *Mog Mountains* to *Negrais*, is a continued *scraggy ridge* of *Land*, tollerably high, broken into cliffs of reddish earth in many places, and generally with low *Trees* and brushwood, without any signs of *Cultivation* or of *Inhabitants*, towards the sea coast; the first low land we have met with is *Point Perian*, which is totally cover'd with wood, and *Diamond Island*, which also is low and woody, and little more than a mile square; but the *Plan* will shew these things better than I can describe them; In the Afternoon, having a brisk Gale at North, we weigh'd  $\rightarrow$ , and rounded *Le Guarda Reef* to the Eastward, and steer'd for the *Island Preparis*, under every sail we could set, in order if possible to get sight of it before night, but

At  $\odot$  Set, seeing nothing of it, we  $\rightarrow$  in 27 fm. *fine stiff ground*, and in an easy Tide, setting ENE, towards the *Gulph of Martaban*.

Th. 3. The wind variable in the North East quarter

At



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At 5 A M we weighed  $\rightarrow$ , and steered SSW till 8 A M, then steered SW

At 9  $\frac{1}{4}$  A M Saw the *Island Preparis*, right a head, we were in 40 fm. water

At Noon the Latitude O  $15^{\circ}. 2' N$

The *Island Preparis* bearing  $\left\{ \begin{array}{l} \text{from S } 61^{\circ}. 30' W \\ \text{to S } 63. 0 W \end{array} \right.$

At 6 P M we  $\rightarrow$  in 20 fm. water, about  $2\frac{1}{2}$  Miles East from the North End of the *Island*.

F. 4. Light Northerly Breezes throughout.

At 6 A M weighed  $\rightarrow$ , and stood in towards the *Island Preparis*, having sent our Pinnace a-head to sound,

At 11 A M we came to  $\rightarrow$  in 8 fm. water, the bottom *stiff ground*, covered with *running sprigs* of *Corallines*, we were about a short mile from the shoar, and here the Lat O was  $14^{\circ}. 49' N$

The Extremes of the *Island* bearing -  $\left\{ \begin{array}{l} \text{from S } 65^{\circ}. 10' W \\ \text{to N } 2. 0 E \end{array} \right.$

The Extremity of a reef of rocks, stretching off from the South End of the *Island*, - S  $35. 30 E$

Two small *Islets*, at the North End, -  $\left\{ \begin{array}{l} N 3. 30 E \\ N 8. 0 E \end{array} \right.$

The *Island Preparis*, is situated between the Latitudes  $14^{\circ}. 48'$  and  $14^{\circ}. 52' N$ . bearing from *Diamond Island*, at *Negrais*, S  $35^{\circ} W$ , distance 69 Nautic Miles. I reckon here



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here from the *Center* of *both Islands* : its greatest length extends NNE and SSW 4 miles, or something more, and it is not more than half a League broad any where ; at the *North End* of the *Island* lye *two small Islands*, or rather *large rocks*, (called *Cow* and *Calf* in our Plan) about which there is no *breakers*, or any sign of *shoal water* : The *East side* of the *Island* is pretty steep to, there being 7 fm. water within a Cables Length of the Shoar ; but along the *West side*, and at the *South end*, there lies a *great shelf* of *rocks*, extending a considerable way into the Sea, so that the *Island* is not approachable on these sides : many of these *rocks* are *above water*, and upon the *reef*, at the *West side*, there are also *two small Islands*, as the *Plan* shews.

*Preparis* is a *ridge* of *moderately high land*, swelling gradually towards the middle, from all sides, and is wholly covered with wood ; by the return of our boat in which the chief mate went on shoar, soon after we anchored, we were informed that there is a *pool*, or *pond*, of *fine fresh water*, a few paces above the sea beach, exceedingly convenient for watering ; and that there was no print, or track, of the feet of *Buffaloes*, *Tygers* or other *Animals*, to be seen on the beach, the only visible Inhabitants being Rats, Squirrels and Monkies, and to the last mentioned Gentry, we were obliged for pointing out the *watering place*.

There are two *Ledges* of *rock*, which project into the sea, just at this *watering pond*, and the space between them is a fine sandy beach, where boats land very conveniently with Casks to water, and the *mark* to find the *watering*



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tering place is this: Bring the *biggest part* of the *Island* to bear NW, and then the *watering Place* is, just by the sea beach, in that *Direction*.

- Sa. 5. Pleasant breezes at N and NNE; during this day we lay at our stream  $\rightarrow$ , part of the people employed on shoar, filling water Casks; the rest in hold. *Fish* here are in whole shoals, and variety of kinds, but none will take bait, at least none that we have tried, after fishing all day I have not caught one.

- Su. 6. A pleasant gale from the Northward

At 8 A M, having received on board the last boat of wood, and having filled 12 Puncheons and one Legar of water (all we intend to take here) we weighed  $\rightarrow$ , and steered S till 10 A M. and then SW

At Noon the Latitude O  $14^{\circ} 39'$  N

At  $2\frac{1}{4}$  P M we set The *Island Preparis* and the Northmost of the *Coco Islands* from the main Top

The former bearing N  $5E\frac{1}{2}E$

And the latter

SbW  $\frac{1}{4}W$  we had then no Ground at 100 fm. line

At 4 P M there was no ground at 170 fm. but

At  $\odot$  Set had ground 35 fm. the bottom *coarse sand* and *small sprigs of red coral*.

L

At



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At 7 PM  $\rightarrow$ , with stream  $\rightarrow$ , in 33 fm. water, the ground *very coarse sand* and *small stones*; here the Flood tide set ESE, and it appears to flow till 9 o'Clock, on full and change days of the Moon, the motion of the Tide was 1 K. 4 F.  $\frac{1}{4}$  hour, by the Log.

M. 7. Wind Northerly, and cloudy and clear alternately

At 6 A M. we weighed  $\rightarrow$  and steered towards the *East side* of the *Northermost Cocos*

At 8 A M we passed close by *it*, and from its equal height and level Top, it is called the *Table* in our *Plan*.

At 10 we  $\rightarrow$  in 18 fm. water at the *East side* of the *Great Coco Island*, and opposite to a *small Island* (called the *Rat* by our sailors) or rather between it and a *shoulder*, upon the *large Island*, which forms a *little deep Bay*, (as the *Plan* shews) we found a considerable number of *Coco trees* growing along the sea beach, but no where else; nor was there any appearance of *fresh water* where we were, perhaps it might be had by digging *pits*, as some have done, upon these *Islands*.

This *Island* is situated between the Latitude  $14^{\circ}.02'N$  and  $14^{\circ}.8'N$ , bearing S  $17^{\circ}.W$  from the *Island Prepara*, distance 46 Nautic Miles; the land is pretty high and hillocky, and entirely covered with wood, there is a *little Island*, at its *south end*, joined to it by a *reef of rocks*, which  
the



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the sea just covers at high water. I should have mentioned before that there is *another small Island*, to the *westward* of that called the *Table*, named the *Slipper* in our *Plan*, for exactly such an appearance does its elevation present to the Eye, in viewing it from the *Northward*

At 4 P M we weighed, and At 6 P M  $\rightarrow$ , near the *South End* of the *Island*, the ground *stiff* and *Oozy*

At  $\odot$  rise weighed  $\rightarrow$ , with a light breeze in the NE quarter, and rounded the *reef*, which lies off the *South End* of the *Great Coco Island*

At 8 A M we steered towards the *Little Cocos*.

At Noon the Lat  $0^{\circ} 13' 58''$  N, by which it appeared that the *Little Coco Island* lies in the Latitude  $13^{\circ} 57'$  to  $14^{\circ}$  N. bearing  $S 48^{\circ} W$  from the *Great Coco Island*, and at 8 Miles distance from the nearest part of it.

The *Little Coco* is moderately high Land, covered with Trees; and of scarce a league dimension, either way; there are here too some *Coco nut trees*, growing near the sea, but no where else; and monkeys and squirrels are numerous.

From this *Island* can be seen part of the *Great Andaman Island*, towards which

At



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At 1 P M we steered, course SSW

At ☉ Set

Little Coco Island bore	-	-	-	N 12°. 30' E
The Extremes of Great Andaman	-	-	-	S 60°. 30' W

distance of the nearest part of it 5 Miles, in 15 fm. water, the ground  
coarse sand, coral rock and small shells

At 6 P M. steered towards *Narcondam*

W. 9. Light variable Breezes in the NE quarter

At ☉ Rise

Saw the *Island Narcondam* bearing - - S 76°. 30' E

At Noon the Latitude O 13°. 32' N

The Peak, or summit, of <i>Narcondam</i> , bearing	-	-	-	S 79°. E
The North Peak of a very high saddle bill, upon the				
Great Andaman Island	-	-	-	S 59. W

At ☉ Set

The same peak of the saddle bill bore	S 69°. 30' W
That of <i>Narcondam</i>	- - EbS 14 or 15 Miles distant

By our *dead reckoning* and these bearings, *Narcondam* should lie EbS, 82 Nautic Miles distant, from the *North End* of the *Great Andaman Island*: but as this distance is partly estimated, and the wind not favouring our pursuit, at present, we shall endeavour to give a more accurate account of its position afterwards.

Light



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Th. 10. Light breezes at North during the first part, Middle and latter parts, the wind varying to ENE, and E; during the night we plyed to windward, under an easy sail, and

At day light

The *Peak* of *Narcondam* bore - - N 68°. 30' E

Which shews that there is a strong Southerly Current.

In the forenoon we stood to the Northward, in order to bring the *Peak* to bear East, or near it, that we might obtain its Latitude.

At Noon the Latitude O was 13°. 22' N, with

The *Peak* of *Narcondam* bearing N 86°. E distant about 3 Leagues;

Its Latitude therefore is 13°. 23' N, nearly; a fresh breeze having sprung up, from the North Eastward, we bore up and steered WSW, with a view to get sight of the *Great Andaman*, which we did and

At 6 P M

Its Extremes bore from - - SW  $\frac{1}{4}$  W to NW  $\frac{1}{4}$  W

The Gale increasfing and being squally, we close reefed the top fails and plyed to windward, during the Night.

F. 11. Fresh Gales, cloudy and very hazey weather, with the wind varying in the North East quarter, which hinders our proceedings much, as we cannot see the *Land*, at any considerable distance; to day, we unbent the Old Top  
M Sails



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Sails and bent New ones, the former being unfit for farther service, untill repaired.

Sa. 12. Wind in the NE quarter, with fresh gales and moderate alternately

At ☉ Rise

The *Little Coco Island* bore - - NbW  $\frac{1}{4}$  W 4 Miles distant

Being very hazey, we stood to the Eastward, upon a wind, and

At ☉ Set seeing no Land, we tacked and stood to the Westward

Su. 13. A fresh gale from the North East quarter

At ☉ Rise

The *Peak of Narcondam* bore - - - N 88°. 30' E.

The *Peak of the Saddle upon Great Andaman* - - S 65. W

We bore up, and steered between the South and West, that we might get into a proper position to observe the Latitude of the *Peak of the Saddle*

The Latitude O to day was 13°. 10' North, with

The *North Peak* of the *saddle hill* upon *Andaman* bearing  
West distance 10 or 11 Miles

It



It is said in the Journal of the 9th Instant that the Latitude O was  $13^{\circ} 32'$  with the *Peak* of *Narcondam* bearing S  $79^{\circ}$  E and *that* of the *Saddle bill* S  $59^{\circ}$  W we now know that the difference of Latitude between these *Peaks* is 13 Miles, and hence the *bearing* will be found to be N  $81^{\circ}$  E, and opposite, and the distance 84 Nautic Miles; it is also said, the same Day, that *Narcondam* by dead reckoning bore EbS, 82 Miles distant, from the *North End* of *Andaman*, which now appears to be pretty just; we have therefore the position of *Narcondam* with respect to *Negrais*, and the *Coast* of *PEGU*, a thing which might be very useful to shipping employed in the Eastern Trade, as *Narcondam* generally serves for a *land mark*, from which, all ships passing this way, generally, take a fresh departure.

*Narcondam* is a very high Mountain in the Sea, rising steep on all sides, we have seen *It* at 22 Leagues distance; and have also seen the *Saddle bill*, upon *Andaman*, equally as far; a *view* of these *places* will be placed in our *Plan* when finished.

This morning, by a very good *Amplitude* observed, the *Variation* of the *Needle* appeared to be  $1^{\circ} 6'$  North Easterly

- M. 14. A fresh gale at NEbN, and squally with light clouds rising from a clear sky to windward, and thickning as they passed over head: during this day we worked to windward, under a very pressing sail, trying to get round the *North End* of *Andaman*; but the Latitude at Noon was
- 13°.



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13°. 02' N, which shews that there is a very strong Current, and that we are losing ground fast; having been drove 8 miles to the Southward since yesterday noon.

At ☉ Set

The *saddle bill* bore NW  $\frac{1}{2}$  W our distance off shoar being 6 or 7 Miles

Night coming on, and the gale freshning much, we tacked and stood off to the Eastward

Tu. 15. A very fresh gale from the NE quarter, and squally, with a very gross haze, and thick clouds all round—we had plied to windward, under every sail that the Vessel could bear, these last 24 Hours, but

At Noon our Latitude was 12°. 44' N, so that, notwithstanding our turning to windward, we have lost 18 miles, in Latitude, since yesterday

W. 16. Wind and weather as before, during the first part, during which we plied to windward as before, with only this difference, that we kept close to the *Land*, to try if any advantage could be had that way, but

At day light we saw that we were still losing ground very fast, there was an ugly confused swell, and *no soundings*, however near the shoar we went,

By 7 A M the visible agitation of the clouds, gross haze, and uncertain state of the wind, shewed strong signs of  
an



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an approaching Tempest, we therefore *bore up*, and coasted along the *East side* of the *Island*, with a design to round its *South end*; and get an open Sea, in case a gale should come on, or to gain a good anchorage, if such should offer.

At 10 $\frac{1}{2}$  I observed a very sudden change upon the surface of the sea, and ordered the lead to be hove immediately, and we had ground at 25 fm, the bottom *fair sand* and *small shells*, we were then a large mile off shoar, and in drawing in a little nearer to it, the depth decreased gradually to 18 fm, and in edging off again, it increased regularly to 25 fm: by which we soon learned that the *bank* was *regular*: our course, from hence along shoar, was South, with the variation of a point either way, to follow in some measure the bendings of the shoar, and we were chased along by a stiff gale

At 11 A M appeared a-head,

Many *small Islands* bearing from - - - SbW to SSE

And as we approached *them*, many *inlets* were to be seen; and at last it appeared to be a *great cluster* of *Islands* and *broken Land*. The largest *Opening*, we saw, seemed to separate the *cluster* of *Islands* from *Andaman*; and to *that* we steered, (a bow at a venture) for there was no retreating, with such a wind and current at our Tail, we had very *regular soundings* 20 and 21 fm. the bottom *soft mud*.

At Noon we had a tolerable good Observation, by watching the motion of the Clouds passing by the Sun, the Latitude 12°. 25' N

N

From



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From Noon until 3 P M, our Course was S, a little Westerly; and at the last mentioned Hour we  $\rightarrow$  in a *good Harbour*, formed by the *cluster of Islands* and the *Andaman*, in 19 fm. water with a fine *soft bottom*.

From the time we  $\rightarrow$  till night, our people were employed setting up the lower and top mast rigging, which was much out of order by carrying such a press of sail, these few days past.

After  $\odot$  Set, we saw a multitude of lights all about us, although there was no appearance of either Houses or Inhabitants by Day light; Indeed the whole Land, on all sides of us, seems to be covered with an impervious wood, down to the waters edge; very much Lightning in the SE quarter towards Midnight

Th. 17. At 1 o'Clock this morning came on a dreadful squall of wind and rain, mixed with Hail stones, and attended with much Thunder and Lightning, from the SE quarter; The Thunder, being reverberated from Hill to Hill about us, made it *dreadfully sublime*; the strength of the wind continued about half an hour only, but the rain was incessant untill Day Light: we rid the Squall out with two anchors a head, and thought ourselves not unlucky in getting into so snug a corner.

All the rest of the 24 hours, we had frequent squalls, from South round to ENE, and it rained, more or less with



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with little intermission. In the Afternoon we unstowed the Sheet Anchor and bent its Cable.

F. 18. During this day we had frequent hard squalls, with constant rain, from South all round to the Eastward, as far as North East, with very much Lightning, constant rain, and some Thunder; during the night we had also frequent squalls, but not much wind in them

Sa. 19. Heavy clouds and light squalls untill Noon

At 4 P M we weighed  $\nabla$  and steered ESE about 2 Miles sounding the *Harbour* or *Strait*

At 5 P M we  $\nabla$  in 20 fm. on the *East side*, near the *cluster* of *Islands*, and about a mile from the shoar; this *Place* is an *excellent Harbour*, and secure from every wind

Su. 20. The first part of this day, close hazey weather, the middle more clear, and clouds breaking up all round, the latter part, light variable winds and clear weather

At 8 A M a Canoe (the first we had seen here) from one of the *Eastern Islands*, paddled off towards us, and lay by, at a Cables length distance; our people waved to them, and called them to come aboard, but of this they took no notice; I ordered our Pinnace to be hauled up on the off side from them, and manned it with European Seamen—



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From Noon until 3 P M, our Course was S, a little Westerly; and at the last mentioned Hour we  $\rightarrow$  in a good Harbour, formed by the cluster of Islands and the Andaman, in 19 fm. water with a fine soft bottom.

From the time we  $\rightarrow$  till night, our people were employed setting up the lower and top mast rigging, which was much out of order by carrying such a press of sail, these few days past.

After  $\odot$  Set, we saw a multitude of lights all about us, although there was no appearance of either Houses or Inhabitants by Day light; Indeed the whole Land, on all sides of us, seems to be covered with an impervious wood, down to the waters edge; very much Lightning in the SE quarter towards Midnight

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men—An old Lafear, a *Mog* from the borders of ARACAN, intreated that he also might be permitted to go in the boat, for that he understood the *Burmah* and *Malay* tongues, and would be able to make the People understand him; accordingly he was sent in the boat; and after directing the Seamen not to beat or abuse the strangers, but to bind them hand and foot, if they were unruly, and bring them on board, the Boat put off. Upon seeing this, the People in the Canoe pulled, for the nearest Land, with all their might; there were Four people in it, and I could see with my spy glass, that two of them were stout Men, and the others were youngsters; just as the Pinnace came up to them, the two Men jumped into the sea, and swam towards the shoar, which was very near them; but the other two, in the Canoe, were taken; they struck at our people, with the sticks with which they paddled the Canoe, for they had no other weapons, and the Sailors soon prevented their doing any mischief with them, by twisting them out of their hands; it now came to the *Old Mog's* turn to shew his dexterity as a Linguist, he stepped into the Canoe, and stood between the strangers, but whilst he was addressing one of them, in the *Burmah* Tongue, with many gestures of the hands and body, the other behind him got a Torch, made of long dry grass and dammer, which he put fire to, blew it up into a flame, and clapped it to the *Old Fellow's* bare breech—This kind of salutation, was what the *Old Mog* was neither aware of, nor used to, and not knowing how to return the compliment, he gave a horrid scream and jumped overboard—Our Jack Tars all the while stood



stood laughing, and by no means endeavoured to prevent what happened, they now however took and tied the two Lads, hand and foot, and brought them along side the vessel—never surely was terror more visible in any countenance, than it was in theirs; when they were brought up, upon the Quarter deck, they dropped down, breathed short, and seemed to be upon the point of expiring: however, upon seeing no manner of violence offered to them, they soon recovered, so as to be able to stand; some of the people's boiled rice was brought for them to eat, but it seemed they knew not what it was, for they would not taste it; I recollected that we had Coco nuts aboard, and ordered some to be brought: Of these they eat greedily, provided they were opened before them, but if they did not see them opened, they would not touch them, a sufficient proof, I should think, that they had some Knowledge of poison: these two Lads seemed to be about 12 or 14 years old; *perfectly black*, and *quite naked*; with *woolly beads*, like the African Cofferie; and features much resembling the *Malayos*, only their noses not quite so flat. when they had eat some Coco nuts, and perceived that no harm was meant to them, they soon became chearful, but seemed to wonder much at the difference of Colour, between the Europeans and Lascars: we gave each of them a piece of coarse cloth, and the Lascars shewed them how to wrap about them, with which they seemed highly pleased.

Between 10 and 11 o'Clock, we saw another Canoe, paddling towards us, with only two People in it, when  
O they

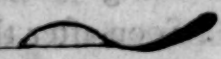


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they came near enough to hear, we made the Boys call to them, and they came along side; and were a stout old Man, and a Lad of about 18 Years old, and both naked—the Lad came on board without hesitation, and immediately snatched the piece of Cloth from one of the other Boys, and wrapped it about himself; Some of our Lascars were fishing, and one of them having just hauled up a small Cat fish, he seized it, in an instant, and eat it raw; the old Man seemed to have great Doubts about coming up out of his Canoe; and, thinking he wanted help, I desired two Lascars to go over the side and assist him; they went down upon the vessel's bends, and got the old Man up between them; here he stopped, and, all of a sudden, turning his back to the vessel's broad side, he caught the Lascars, one under each arm by the neck, and jumped into the Sea with them both, with a hideous roar like the American War-whoop: they were all under water for more than a minute, and when they came up to the Surface, there was a Lascar on each side of the old Fellow, at some distance; the Lascars made the best of their way into the vessel, and swore that the old Fellow was a devil, and they would have nothing further to do with him: the old Man swam for about ten minutes about the Vessel, and at last came up by the cable, and in, over the head rails, upon the forecastle; still whooping and roaring, as he made his observations upon every thing about him; at last he tried to pull the ring-Bolts, out of the Deck, and tugged at them most heartily, for some time, before he could convince himself, that they were not to be pulled out. By this we understood that  
he



he wanted Iron, and accordingly some Nails, and old iron hoops, were brought, which he accepted of very joyfully; he did not seem to like our Guns, and several times put his hands upon them crying Boo Boo. About Noon two large Canoes were seen coming off, from where the two Men landed, who swam ashore in the morning; there were five stout men in each, and when they came pretty nigh, we saw that the Paddles, which they used, were also Bows to shoot Arrows with, they were in this form  \*one end in the form of an Oar blade, or paddle, and a slip of rattan fixed to the middle and upper end for a Bowstring.—Their intention, no doubt, was to rescue the two Boys, that we had taken in the morning, but when they came pretty close to us, the Boys called to them; they would not, however, come along side, but a sort of Conversation took place, between those we had on board, and them, and here our old man was observed to assume a great deal of gravity, while he was speaking to them; and presently we saw them hiding their Bows, or Paddles, under water, that we might not see them; very soon afterwards, one of the boys went into the water, and swam to their Canoe; and I gave the other a piece of cloth, for the one that had been taken from him, and a new paddle for his Canoe; with which he went into it, and pulled

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\* Such a combination of weapon and implement, as is no where else to be met with; but, from the circumstance of the dammer torch, we learnt that there is plenty of it upon the Island; and we took notice afterwards that the lights, which we saw at night, were such Torches; and that the people were fishing with them, and wooden lances, with which they dart the fish, as they come to the light.



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pulled off along side the others; they took him in along with them, and instantly made the Boys throw the cloth, nails &c, which we had given them, into the old Canoe, and pushing it off from them, they pulled towards the shoar, in the utmost haste and confusion.—The old man and his son were still aboard, and he seemed, at first, to be both surprized, and nettled at their behaviour, but observing us laughing at it, he also burst out into a loud laugh, and then kept clapping his hands and shouting after them, till they were entered one of the *Inlets*: Soon after this the old fellow went into his Canoe, after having received all the things which the others left behind them; he then tried his strength to pull our main chain plates off, from the side, and, that not succeeding, he dropped astern, and had another spell to pull off our rudder chains; here also he had no success, and being tired, I suppose, for nobody interrupted him; he and his son set off for the shoar, pulling at an easy rate, and singing a song all the way; we had hopes, by treating these people kindly, that they would return to be better acquainted with us, as we would willingly have been with them\*, it is generally believed, in this Country, that they are Cannibals, and eat one another, or at least eat those of their Enemies, whom they take or kill in Battle, how far this is true, I know not; but certain it is, that nothing in the Human shape can have a more wild appearance, either in its person or manners.

At

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\* Nothing of this happened; and although we were about the *Island* till the end of January, not a boat or man was seen by us afterwards.



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At 3 P M we weighed  $\rightarrow$  and steered SW, through the narrowest part of the Strait, and

At 6 P M  $\rightarrow$ , with the stream, in 30 fm. water fine soft Ground.

In coming through the Narrow, we kept close to the Island, on the Larboard side, and had 8 fm. on the end of a Spit of rocks and sand, but the pinnacle, founding in the middle, had soft ground, and from 15 to 20 fm water

M. 21. Pleasant breezes from NNE to East, during the first and middle parts of this day, the latter part squally.

At day Light weighed  $\rightarrow$  and steered SbE, that being the Course thro' the middle of the Southern part of the Strait, which here becomes very spacious, sufficient to receive the largest fleet of ships. From 8 A M till Noon, the depth increas'd regularly from 28 to 41 fm.

Latitude O 11°. 59' N. with

The Extremity of the Islands,  
forming the East side of the Strait, bearing } S 49°. E.

We were now got clear out of this singular Passage, which appears to be 20 Miles long, nearly, and which we

P

have



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have reason to believe no Ship or Vessel was ever in before\*, we have therefore denominated It, *Diligent Strait*; The *Land* which forms the East side of this Passage, is so broken into *Islands* and *Inlets* as to be past all Description, we have therefore called it the *Archipelago* of *Andaman*, on our Plan, and to the Plan I must refer, for giving a tolerable Idea of the Place, for that has been done with some pains from a very multitude of bearings. All this Archipelago is more or less mountainous, presenting every where to the Eye an impenetrable Thicket.

Again the *body* of *Andaman*, on the *west* side the *Strait* and for a great way to the *Southward* of It, is one continued lofty ridge of mountain, every where covered with wood, except where it is too steep for any thing to grow, and, in such places, it is a reddish earth, which every squall of wind and rain washes down, more or less.

At ☉ Set

The *Southern* Extreme of *Andaman* bore . . . S 15°. W  
And the *East* side of the *Narrow* of *Diligent Strait* N 25. E

At 10 P M. Came on a hard squall of wind and rain, from ESE, before which we had furled our Top-Sails, and

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\* I have the Copy of an old *Portuguese Chart* of the *Andaman Islands*, communicated to my deceased Friend the *Honorable Mr. Howe* by Capt. *Edmund Maffy* in 1767, in which this very *Strait* is laid down.





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and therefore let the vessel jog on, for the night, under her foresail, veering her occasionally

Tu. 22. Fresh gales at NE. and squally throughout

At Day Light made sail, and steered WbS towards an Opening, or Inlet, near the South End of Andaman Island.

At 7 A M passed close by ditto, it did not appear to be roomy within

At 9 A M we steered through a Passage, between the South End of Great Andaman, and a small Island, which lies off the SE Extremity of It, at about a mile distance, here the Currents set strong to the Eastward, and caused a very great rippling, and foaming of the water, which might intimidate Strangers, but there is no danger; for we had no ground at 40 fm. (two deep-sea leads going) till we were quite through the Narrow, and near a league to the Westward of It, when the depth was 15 to 20 fm. variously, for three or 4 casts, and then we had regularly 13 fm. in rounding the South End of Great Andaman at about a league distance, the bottom coarse white sand.

At Noon the Latitude  $011^{\circ} 19' N$  with

The Southern Extremity of Great Andaman bearing  $N 77^{\circ} 40' E$

At a small distance, consequently this Island is situated between the Latitude  $11^{\circ} 20' N$  and  $13^{\circ} 35' N$ , extending



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ing North and South 135 Nautic Miles in length, which is 20 leagues longer, and more Southerly, than the common Sea Charts shew it to be\*, a great proof that it has never been examined before, but at a distance.

At 3 $\frac{1}{2}$  P M we bore up a little, and steered towards an *Island*, which appeared in the Offing, in that Direction; the water deepened regularly to 47 fms, and then shoaled again to 35 fms, as we drew near the *Island*

At 6 $\frac{1}{2}$  P M we hauled up, Tacked, and stood toward the *Andaman*, and

At 11 $\frac{1}{2}$  P M  $\rightarrow$  in 20 fm. the bottom *grey sand* and *small stones*

W. 23. Fresh breezes and variable in the NE quarter, during these 24 Hours we have been plying to windward with all the sail we could bear, in order to get up along the *West side* of *Andaman*, but have made very little progress *indeed*, there being a strong current against us

At Noon our Latitude was 11°. 28' N

The *Island* in the Offing bearing W $\frac{1}{2}$ S

As

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\* The Plan of *Great Andaman Island*, as laid down in the Sea Charts, will do as well for any other *Island*, as for *It*; for it has no sort of resemblance to it, either in form or extent. R



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As we generally stood but little way off shoar, our depth of water *off and on*, was from 20 to 56 fm. in about 20 fm. the bottom is, mostly, *coarse sand* and *shells*, but at 30 fm. and *above*, it is *stiff* or *soft ground*.

Th. 24. The wind NEbE, with squalls from off the *high Land*; continued working to the Northward these 24 hours, and generally had 20 fm. with *hard sand* and *Coral*, about a short league from the shoar, the depth increasing, regularly, to between 40 and 50 fm. *soft bottom*, about 10 or 12 Miles from the shoar, and, beyond that distance, *no soundings*,

Our Latitude O to day was  $11^{\circ} 48' N$

F. 25. Stiff gales and squally throughout, which blew us under close reefed topails,

At Noon the Latitude O was  $11^{\circ} 55' N$

The Vessel straining much in a confused sea, we bore up, and steered SE, for an *opening*, or *inlet*, in the shoar.

At  $5\frac{1}{2}$  P M. Just as we were entering *It*, it fell calm and arrested us there, but a small breeze coming off shoar soon after, we wore and stood out to sea, there was still a confused swell, and

At 11 P M it began to blow strong at NE again

Q

Winds



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Sa. 26. Winds variable in the NE quarter, and alternately cloudy and clear weather, as it has not blown so strong this day, as it did before, we have again been trying to work up to the Northward, to get some tracing of the *West side of this Island*, which still appears mountainous and woody, so far as we have come,

The Latitude O to day was  $11^{\circ} 37' N$

Su. 27. Wind and weather as yesterday, although we have had *fine flants of wind*, and generally lay up NNW upon our off stretches, yet we have got very little, all this Day, to the Northward, the Latitude being  $11^{\circ} 49' N$ , which indicates a strong Southerly Current.

M. 28. Very fresh gales at NNE; finding that we made no progress beating under close reefed topsails, and the season being far advanced, considering what we had yet to do to the Southward,

At 11 A M we bore up, and steered toward the *little Island* in the Offing, before mentioned, and

At  $7\frac{1}{2}$  P M we  $\rightarrow$  at the *West side* of it in 30 fm. water *coarse ground*.

This is a pretty *level Island*, not unlike *Diamond Island* at *Negrais*, but somewhat larger, and totally covered with trees; It is, in our Plan, called the *Northern Centinel*, from its position with respect to *Duncans Passage*, considered as a *Gate-Way*, and It as a *sentry box*\*

Moderate

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\* By reports, which I have heard, it would seem that Captain *John Lenox* got some *fresh water*, for his Ship, at this *little Island* lately 1783. R



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Tu. 29. Moderate gales in the NE quarter

At day-light weighed  $\rightarrow$  and rounded the *South End* of the *Centinel*, and steered ESE towards *Duncans Passage* (i. e. the *Opening* between *Great* and *Little Andaman*)

At Noon the Latitude O was  $11^{\circ} 19' N$

At 2 P M we shoaled suddenly, from 13 fm. *soft* ground, to 7 fm. the bottom *immense black rocks*, which we could easily see at this depth, we altered our Course to South, and had 8 to 10 fm. variously, for a little time, we steered WSW, and soon deepened to 18 fm. again,

From 5 P M to 7 P M we steered ESE, and at the last mentioned hour we  $\rightarrow$  in 19 fm. the bottom *very coarse sand* and *rotten stones*.

W. 30. Wind as yesterday, with heavy clouds all round.

At Day-light we weighed  $\rightarrow$  and steered Eastward, and sounded *Duncans Passage*, or the *Opening* between the *two Andamans* (for which with all its little Islands, see the *Plan*).

At  $8\frac{1}{2}$  AM we bore up, and steered South, towards two *small Islets*, which we call the *Brothers*.

At  $10\frac{1}{2}$  AM, being about a mile from the *North Eastern Brother*, we steered SW; and, in a little, shoaled to 10 fm. we then *bailed up West*, and in half an hour increased our depth to 15 & 18 fm.

At



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At Noon the Latitude O was  $10^{\circ} 59' N$ , with

The Extremes of <i>Great Andaman</i> bearing	{ from $N 9^{\circ} 30' E$
	{ to $N 23. 30 E$
And those of the <i>Little Andaman</i>	{ from $S 16. 20 W$
	{ to $S 27. 0 W$

and our distance, off the *North End* of *It*, 9 or 10 Miles

At the same time

The <i>Eastern Sister</i> (see the Plan) bore	-	$S 75^{\circ} 30' E$
And the <i>Western One</i>	- - -	$S 42. E$
Moreover the <i>Southern Centinel</i> bore	-	$W \frac{1}{2} N$

In steering West,  $\frac{1}{4}$  of an hour after these Observations, we had 17 to 19 fm. water, the bottom *rocky*; we then came to a very *strong rippling* of the water, extending NbE and SbW, it appeared at a distance very like *Breakers*, but when we passed through it, we instantly had 30 and 35 fathom water, the bottom *fair sand*.

This was no other, than the *edge* of a *ledge* of *rocks* and *broken Ground*, which extends between the *two Islands* of *Andaman*, but is not dangerous\*, as our Plan will shew.

We are now about to leave the *Great Andaman Island*, of which hitherto nothing was known, and what we have been able to do will mend the matter but little.—Concerning it I have only to add, that every part of its *Coast*, that we have seen, is intirely free from Dangers: nor is there any thing a Navigator needs to fear about *It*, but what may be seen; In this point the *Island* is much more friendly than has generally been believed; The part we

\* According to *Wragg's* sketch It is very dangerous.

*B*



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we called *Diligent Strait*, affording good ↗ Ground, and security from every wind.

There are *several Inlets* about *this Island*, which doubts upon Examination would be found to be *good Harbours*, but a *regular Survey* of *these*, must first take place, before their utility is known; and no doubt the time is hastening when it will be wondered why this great mass of Land, situated almost in the center of European Establishments, should have been so long neglected.

At 2½ P M we steered SSW, towards the Western Extreme of *Little Andaman*, and our *Soundings* decreased gradually from 45 to 18 fm. this last depth was about a mile from the shoar, the bottom was *sand* and *small broken shells*. In coasting along the *West Side* of *Little Andaman*, at a small distance from the shoar, the *soundings* were very regular, for some time, but upon its *shoaling* suddenly, from 17 to 12 fm. at a cast, we bore off a little, and ↗ in 25 fm. the bottom *fair sand*.

Th. 31. The wind Northerly, and variable, during the first part, and cloudy all round, middle squally with rain and many *water spouts* all about us, the latter part a fresh gale at NE and fair weather.

At 6 A M weighed ↗ and stood to the Southward, sounding &c along the *West side* of *Little Andaman*.

At 10 A M we saw three Men upon the beach, in a little Bay, on the *West* side of the *Island*, but

R

upon



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upon our approaching within about  $\frac{1}{2}$  a mile of the shoar, they fled into the woods,

At Noon the Latitude O was  $10^{\circ}. 28' N$  with

The Extremes of *Little Andaman Island* bearing  $\left\{ \begin{array}{l} \text{from N } 5^{\circ}. E \\ \text{to N } 82. E \end{array} \right.$

Hence by our Observations, the *Island* is situated between the Latitude  $10^{\circ}. 31' N$  and  $10^{\circ}. 52' N$ , being 7 Leagues long, and is about 5 Leagues broad; bearing from the *Body of Great Andaman* SbW. It is a *single Island*, notwithstanding what the *Old Charts* say of *It*, the *Land* is low and rises with an easy swell, towards the *middle*, or rather nearer the *South End*; and the whole is one continued wood; exactly such as *Barbadoes* appeared to the first Discoverers of it, does little Andaman appear at present, only this *last* is the largest of the *two*; In the afternoon we worked to the *Eastward*, along the *South End* of *Little Andaman*, but met with a very strong Current setting SW; these Currents begin to be very troublesome hereabout.

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F. 1. At 6 A M.

The Extremes of *Little Andaman* bore  $\left\{ \begin{array}{l} N 15^{\circ}. W \\ N 33. E \end{array} \right.$

And there being a fine fresh gale, at NE, we set off towards the *Island Carnicobar*, to try if we could get sight of *It* before dark, as *Its* situation has never been well ascertained;



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certained ; we steered South East, on account of the current we observed, and

At 10 A M

The *Little Andaman*, was set from the main Top bearing NbW $\frac{1}{2}$ W

This shews a strong westerly Current ; after 3 P M we steered SSE: and

At  $\odot$  Set there was no *Land* in sight, by which it would seem, that the *Carnicobar* does not lye in the position given it in the Directory ; for we have run 62 Miles SSE from *Little Andaman* ; the *Island* should therefore be in sight, at least,

At 6 P M we shortened sail and continued our Course till 11 P M. then being clear Moon Light, and seeing nothing of the Land, we hauled our wind to the Eastward

Sa. 2. Moderate weather, and variable winds in the NE quarter

At 6 A M Saw

The *Island Carnicobar*, from the Mast head, bearing SSE.

At 7 A M It was set from the Deck, in that Direction,  
and



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and we wore round, and *hauled up* to the Northward, to try if we could *fetch in* with *Little Andaman* again; the Latitude O to day was  $9^{\circ} 37' N$ .

Su. 3. Wind and weather as yesterday, to Day the Latitude O  $10^{\circ} 15' N$  but *no Land* in sight, although we had before seen *Andaman* in a more Southern Latitude, the truth is, the winds are too light and baffling, for these strong Currents, we stood to the Northward till 4 P M when seeing nothing of the Land, we tacked, and stood to the Southeastwards.

M. 4. Light variable breezes, with some squalls, from the NE Quarter, from Midnight till 10 A M. we were standing to the Northward—and by our Account, should be to the Eastward of, and in the Latitude of, *Little Andaman*, we therefore bore up and steered WNW untill 4 P M to try if it was really so or not, and not seeing any thing of the Land at that Hour, we *hauled our wind* to the South Eastward.

Tu. 5. Very hazy weather throughout

At 6 A M Saw

The *Little Andaman Island*, from the Deck, bearing from E to EbN

At 10 A M observing the *water* become suddenly discoloured,



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loured, we sounded and had ground at 13 fm. the bottom  
rocks and sand,

The South West Extreme of Little Andaman at this time bearing N 79°. E  
distance 6 Miles

It afterwards shoaled to 10 fm. and at this depth we  
could plainly see the bottom, white sand with great black  
rocks; It is here necessary to observe that we had before  
passed between this reef and the Island, and had no less  
than 19 fathom water, the bottom fair sand; Our Plan  
shews the situation of this reef, and the Vessel's track both  
ways.

At Noon the Latitude O was 10°. 23' North

The Extremes of Little Andaman	-	-	-	NNE to N 70°. E
The South West point of It	-	-	-	N 53. E

In the Afternoon a fresh gale at NE.

W. 6. Fresh gales at EbN and ENE.

The Latitude to day was 10°. 30' N, at a small distance  
from the South End of Little Andaman,

Its Eastern Extreme bearing	-	-	-	S 83°. E
The Western one	-	-	-	N 77. W

But had no ground at 50 fm. line, we just tacked, and  
laid the Vessel's head to the SE, and upon sounding again  
had no ground at 170 fm. the great depth of water, close  
to the South End of this Island, is a little remarkable, con-

S fidering



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sidering the *Shelf* at *Its* West side; In the afternoon, in working to the Eastward, we got *soundings* again, at the SE Point, and there is no doubt, but the *Bank* continues all along *Its East side* up to *Great Andaman\**.

At ☉ Set

*Little Andaman* bore { N 28°. W  
N 15. E dist. off about 17 Miles

At 11 P M. had a hard squall of wind and rain, from the SE, which continued an hour, after which we stood towards the *Island*.

Th. 7. Fresh gales in the NE quarter, and cloudy with much Lightning,

At Noon

The Extremes of *Little Andaman Island* bore { N 5°. W  
N 63. W

The Latitude O being 10°. 25' North

At ☉ Set, saw, through the haze,

Part of the *above Island*, bearing NNW distance 13 Miles

Observing the Current to be now slack, or rather setting a little to windward, we set off again for *Carnicobar*.

Moderate

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\* By the *Soundings* we had between the *two Andamans*, and those at the SE Extreme of the *Little One*, This can hardly be doubted. R



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F. 8. Moderate and cloudy weather

At Noon the Latitude  $0^{\circ} 50' N$ .

And we continued our Course towards *Carnicobar*, till  
☉ Set, but saw no *Land*; indeed the winds are so unsteady,  
that we cannot depend upon the run for four hours  
together.

Sa. 9. Wind and weather as before, from

Midnight we steered SSW and

At 8 A M we saw the *Island Carnicobar*, right a head,

At Noon the Latitude  $0^{\circ} 13' N$ .

The Extremes of *Carnicobar* bearing from East to  $S 13^{\circ} 30' E$

At 2 P M we came to  $\rightarrow$ , at the *West side* of the *Island*,  
in 35 fm. water, the bottom *rocky* and *coarse sand*, we were  
about a Mile from the shoar; There was lying here a  
French Snow loading Coco-nuts for the *Pegu* market.

After the trip we had had, along dreary Coast and broken  
rugged Lands, the appearance of this beautiful *Island*,  
and good natured freedom of *Its inhabitants*, was extremely  
pleasing.

At 4 P M we had a hard squall of wind and rain, from  
the NE.

Squally



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Su. 10. Squally weather with rain, we weighed the S. B.  $\rightarrow$  and let go the B. B.; having bent a new Cable to it; the old one being quite worn out. Our people employed preparing the Water Casks, to get a small supply of fresh water here.

M. 11. A fresh gale from the Eastward, throughout this day; In the morning we sent our Boat for fresh water.

At Noon the Latitude O where we lay (near the middle of the *West side* of the *Island*) was  $9^{\circ} 13'$  N. and, by all I can collect, from our three runs between *It* and *Little Andaman*, *It* seems that *Carnicobar* bears, from the *SW point* of *that Island*,  $S 25^{\circ} E$ , distance 87 nautical miles.

At Noon came to  $\rightarrow$  here a ship from Fort St. George, *Squires*, master, to load Coco-nuts for *Pegu*.

Tu. 12. First part fresh gales from NNE to NE; the middle and latter parts, moderate and cloudy;

This morning sent the boat a watering again, and she returned with 6 Gang casks, the shoar here being *rocky* and a considerable *surf* upon it, we find it not very convenient to water here, there being danger of staving both boat and Casks, I therefore resolved to take no more than just to supply our present wants, as probably some of the *Nicobar Islands* will be more convenient to water at.

W 13. Fresh gales and moderate by turns,

At 7 A M we weighed  $\rightarrow$  and stood to the Northward,  
with



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with a view to examine the *North* and *East Sides* of the *Island*, but we found the Current setting so strong to the South Westward, that we lost ground very fast, and were therefore obliged to stand in, and  $\rightarrow$  at the *West side* of the *Island* again.

Th. 14. Ditto wind and weather.

At 6 A M we weighed  $\rightarrow$ , and At 2 P M  $\rightarrow$  again.

At 5 P M, finding the Current slack, we weighed  $\rightarrow$  and stood to the Northward, but there came a very heavy squall, of wind and rain, from the NE, which continued till 6 P M, after which we plyed to windward till midnight.

F. 15. Fresh gales and very squally weather throughout; although we had plyed to windward all last night, yet in *standing* on for *Carnicobar*, this forenoon, we could scarce fetch *any part* of the *Island*, so strong have the Currents been.

At 1 P M, however, we got into 45 fm, and were obliged to drop our  $\rightarrow$ .

At 6 P M, *Squire's* Ship drove to Sea, in a hard squall from the Eastward\*.

Sa. 16. Cloudy and squally weather throughout; the Spring  
Tides

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\* This Ship never could fetch up to the *Island* again, and we learned afterwards that in about one month the ship got to *Coringa*. R



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Tides *being on*, we observe that they affect the Currents considerably, it runs slowly to windwards, for about 3 hours, as if it were *Tide and half Tide*.

Su. 17. Fresh gales and cloudy during the first part, middle and latter parts more moderate;

At 7 A M we weighed  $\rightarrow$ , and worked to the Northward, with the little drain of *flood Tide*.

At 11 A M we  $\rightarrow$  at a little Bay, the NW part of *Carnicobar*, in 15 fm. water, the ground *coarse sand*; Tide setting strong SWbW.

M. 18. A fine fresh breeze in the NE quarter, and variously cloudy and clear weather.

At 5 A M, finding a drain of Tide setting ENE, we weighed  $\rightarrow$ , and worked round the *North End* of *Carnicobar*, and then stood to the *Southward*, along the *East Side* of *It*, and all the way had fine *soundings* (as the Plan shews)

At Noon the Latitude  $09^{\circ} 10'$  N. in 34 fm. water

The Extremes of <i>Carnicobar</i> bearing	-	-	-	{ from N $32^{\circ}$ W
				{ to S $36^{\circ}$ W
distance off shoar one mile At the same time				
The body of the <i>Island Batty Malaké</i> , or the <i>Quoin</i> , was				} S
seen from the mast head bearing	-	-	-	

Being now about to leave *Carnicobar Island*, it must be observed, that *It* lies between the Latitudes  $9^{\circ} 7'$  N, and  $9^{\circ} 13'$  N, extending in length, N and S, 6 Miles, and in width



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width it is about 5 Miles; *It* is a low and level *Island*, perhaps not more than 6 feet above the surface of the sea; but it is exceedingly fruitful, and might be easily made more so, were that necessary; about its borders the Coconut Trees are innumerable, and other fruit trees, not a few; but the middle of the *Island*, is only covered with long rich grass, and here *Hogs* breed in *multitudes*, having no owner till they are caught; here are plenty of *Oranges*, *Citrons*, *Lemons*, *Limes*, *Bananas*, *Plantains*, *Yams* and *sweet Potatoes*; they have likewise *Fowls* and *Pidgeons*, and catch variety of *wild-fowl*, all their Animals they feed with *Coco-nuts*, for they have no sort of *Grain*.—The *Inhabitants* of this *Island*, are a stout and healthy looking People, generally above middle stature, their features and complexion, resembling the *Malayos*, but their Noses are not so flat; the Men are fond of wearing Hats, and indeed all kinds of European apparel, when they can get it; but the Native Habit, is no other than a long stripe of blue Cotton Cloth, about a span in width; this they wrap about their *fork*, so very tight, that the Distinction of Sex is not perceptible, hence Strangers are apt to think that they are all castrated; the Women wear a kind of petticoat of a matted texture, made of grass, which reaches down to the knee, and about their bosom they wrap a stripe of blue Cloth, they live in little Villages, about the border of the *Island*, for the conveniency of carrying their *coco-nuts* to the Ships; the Houses are raised 12 or 14 foot from the ground, upon a circular row of wooden pillars, the top being conical and thatched with long  
grass



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grafs\*, some of these Houses are very large and contain three or four Families; they all sleep in little Hammocks, made of matted grafs, or the rind of trees, which they suspend to the roof of the House; the Males on the one side, the Females on the other; and we are told, that the intercourse of the sexes is, commonly, by stealth *in a manner*, among the trees and bushes; Industry is here not known, for bountiful Nature supplies all their wants, if such a people can properly be said to have any; Religion and religious worship†, if such they have, is entirely hid from strangers; and so are their Quarrels, if they have any; Indeed if they be free from *Law* and *Religion*, there is very little to *quarrel* about: and in one word, we see *here* the manners of a people, the *strongest satire* upon *Legislation* and *Government*! a sight sufficiently humiliating. In the afternoon we steered for *Batty Malvé*, and

At 6 P M ↗, at the *West End* of that *Island*, about  $\frac{1}{2}$  a mile from the shoar, in 40 fm: water, the ground *coarse grey sand*, we had been told that there was no *soundings* about this *Island*.

Tu. 19. A fresh gale from NE to EbN, we began to weigh our ↗ at Day light, and

At

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\* All the Houses on the *Nicobar Islands* are constructed the same. R  
† We were afterwards informed by the *Danish Missionarys* of *Non Covey*, that they had not been able to make one *Profelyte* in five years. R



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At 6 A M, the vessel having cast with her head to the Southward, we had only 25 fm. water; so that the *Bank* extends farther off, and is *shoaler*, at the SW Corner of the *Island*, than where we lay: *Batty Malvé* is a small *Island*, situated in Latitude  $8^{\circ}. 46' N$  to  $8^{\circ}. 47' N$ , being scarce a mile from North to South; and from East to West, it is about twice as much; It is an entire *Rock*, of a wedge-like form, pretty high at the west end, and sloping to the Eastward, hence it is by some called the *Quoin*; here there are no Inhabitants, there being only a thin skin of soil upon the *Rock*, producing some creeping plants, shrubbs and a few scraggy Trees, but no fresh water.

At Noon the Latitude  $8^{\circ}. 35'$  North

The Body of <i>Batty Malvé</i> bearing	-	-	N $3^{\circ}$ W
The Little Island <i>Chowry</i>	-	-	S $53^{\circ}$ E

We find the Current setting very strong SW here.

W. 20. Fresh gales and cloudy, with some squalls;

At Noon the Latitude was not observed with any certainty, but

The Extremes of the <i>Island Terressa</i> bore	-	{ from Ebs.
		{ to N $54^{\circ}$ E

A high <i>hummock</i> , the SE Corner of <i>Chowry</i> , bore	NNE
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The Current exceedingly strong.

U

Wind



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Th. 21. Wind and weather as yesterday; during these 24 Hours we plyed to windward, under the lee of the Island *Terressa*, and never stretched beyond the *wake* of it, on account of the strong Current, now running to the South Westward, although we were 7 or 8 Miles from the *Island*, yet many of the Inhabitants came off to us in their *Belongs\** bringing Hogs, Fowls, Yams, and Coco-nuts.

At ☉ Set

The Extremes of *Terressa* bore { from N 4°. 30' E distance off shoar  
to S 70. 0 E  
about 2 Miles, and no ground at 140 fm. line

At 9 P M, got *ground* at 37 fm, on the SW *side* of the *Island*, and  $\rightarrow$  there,  $\frac{1}{4}$  Mile from the *Land*.

F. 22. Wind and weather as before,

At 6 A M. we weighed  $\rightarrow$  and stood to the Northward, along the *West side* of *Terressa*, and then stood over towards *Chowry*.

At Noon the Latitude O 8°. 26' N

The Extremes of <i>Terressa</i> bore	{ S 35°. 30' E
	{ S 60. 30 E
Those of <i>Chowry</i>	{ N 60. 0 E
	{ N 84. 30 E

In

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\* General name for Boat. R



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In crossing over here, the Current drove us 5 miles to leeward, and we were obliged to work up, with short stretches, in the wake of *Chowry*.

Sa. 23. The whole 24 Hours fresh gales and squally from the North Eastward.

At 11 P M we got to  $\rightarrow$  in 25 fm. under the *West side* of *Chowry*.

Su. 24. Wind and weather the same as yesterday;

At 6 A M we weighed  $\rightarrow$ , to try if we could work round this beautiful little *Island*, the squalls varying, the wind assisted us a litle, but we did not succeed:

At Noon the Latitude  $0^{\circ} 36' N$

The Extremes of <i>Batty Malvé</i> bearing	{ NNW
	{ $N 36^{\circ} W$
The <i>body</i> of <i>Chowry</i>	- - - S $34^{\circ} E$

Hence and from former remarks we conclude that

<i>Chowry</i> and <i>Batty Malvé</i> bear	S $32^{\circ} E$ , and opposite, dis-
tance 19 Nautic Miles.	

*Chowry* is in the Latitude  $8^{\circ} 28' N$ , and is scarcely half a League over, either way, but it is a little *Fairy Land*; it is a low and level *Island*, not more than 6 foot above the surface of the Sea, except the *South East Angle* (for it is of a square form) which is an immense *Rock*, rising, perpendicular out of the sea, to a very considerable height, above the Tops of all the Trees upon the level part



part of the Island; and, in some points of View, appears like an *Old Castle in ruins*—the level part is one continued Orchard of all the Tropical Fruit-trees, and its borders is appropriated to the Coco-nut Tree, particularly; from the Soil about the *Cliffs* of the *high rock*, on its side next to the *Island*, there is produced Citron, Orange, Lemon and Lime trees, which, from the singularity of the situation, have a very pleasing Effect; in short it is altogether the most romantic place I have ever beheld; the Inhabitants are of the same cast as those of *Carnicobar*, they came off to us, in their *Bollongs*, while we were yet at a great distance, and brought Hogs, Poultry and Fruits; They complained to us *sadly*, that no ship had been at their *Island* for several years past, and assured us, that notwithstanding the smallness of their *Island*, they could load *two large ships*, with Coco-nuts, annually; *here were people complaining of all the necessities of Life, being too plenty and of having nothing to do*: we had sent our boat on shore early yesterday afternoon, whilst we were working up against the Current, and, on its return, the Crew said, they had *been almost killed with kindness*; it seems they have here a *manufactory of earthen ware*, with which they supply almost all the other *Nicobar Islands*.

M. 25. Fresh gales and squally, during this Day, we coasted along the *West side of Terrestra*, and

At 3 P M  $\rightarrow$ , near the SE point of the *Island*, in 30 fm. water, the bottom *very coarse sand*, here again we perceived a regular return of the *Tide*.

The



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Tu. 26. The first and middle parts of this day, a fresh gale and squally, the latter part mild and inclining to a Calm;

At 1 AM we weighed  $\rightarrow$  and, with a small drain of windward Tide, tried to get in between *Bompoka* and *Terressa*, but were soon stopped, and driven back by a strong Current, from the North East, setting through between these Islands.

It is remarkable that the *Tides* take place no where among these *Islands*, but only where it is not exposed to the *Currents* from the *North East*; and I suppose this observation may be reversed, with respect to the opposite *Monsoon*, with great certainty;

The West side of the Island *Terressa*, and East side of *Cheowry*, shut on, at } N 9°. W, and opposite,  
And the body of these *Islands* are from one another, S 28. E, and opposite,  
distance 6 Miles, I mean here from the nearest part of the *Islands*.

*Terressa* is situated between the Latitude 8°. 12' N. and 8°. 22' N. It is of a circular shape, extending NW and SE, and, reckoning the bending, is about 15 miles long; its greatest breadth is, at the NW End, something more than 5 Miles, but to the South Eastward, it is scarcely half as much: both *Ends* of the *Island* are *high land*, and the *middle is low*, on which account, at a distance, it makes like two *Islands*. There is a variety of ground here, Hill and Dale, woody and clear; there are many *Inhabitants* here, but not a number in proportion to its extent, com-

X

pared



pared with some of its neighbours, they have Hogs and Fowls here, and would rear many more, if there were any demand for them; the roots and fruit here is the same as at *Carnicobar*, with the addition of a Quantity of *Beetle-nut*, most of which is left to perish in the husk, there being no foreign demand for it.

The Island *Bompoka* is situated Eastward, from the Southern End of *Terressa*, and separated from *It* by a *Channel*, only 2 Miles in width, it is an entire *Mountain*, rising steep out of the sea, and partly covered with wood; Its summit is a sharp ridge, extending North and South, about half the length of the *Island*, and from it, all sides slope regularly to the Waters-Edge.

The *Ladies* of *Bompoka* are noted for being the *fairest*, and by far the *prettiest*, of all the *Nicobarians*, if we might believe the stories and nocturnal adventures, which they tell us, of *Knights Errant*, who have rescued some of them from the precipice, on which they were born. As we were prevented from entering between *Terressa* and *Bompoka*, we stretched to the South Eastward, and

At 11  $\frac{1}{4}$  A M  $\rightarrow$  at the North west side of the Island *Tillongchool*, or *Katchall* in 25 fm. water, here the Latitude  $08^{\circ} 0' N$

The Extremes of *Katchall* bearing { from S  $16^{\circ} 30' E$   
to N  $32^{\circ} 0' E$  off shore about  
two Miles, on coarse sandy bottom

At

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\* There is an *Omission* here, the Position of *Bompoka* and *Terressa* have not been altered from the Log Book. R



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At 1 PM the Tide turned, and had a flow motion to windward, on seeing which we weighed  $\rightarrow$ , and worked to the North Eastward, along the Coast of *Katchall*, and tried to get between *it*, and the Island *Camorta*; but, there coming little wind, we were out of soundings. At 9 PM, however with what little Airs there was, and standing towards *Katchall*, till midnight, we struck ground at 100 fms. perhaps not more than twice as many fms. from the NE Corner of the Island.

W. 27. Fresh Gale, moderate, squally, cloudy, &c.

At 1 AM we plyed to windward, round the NE Extreme of *Tillongchool*, or *Katchall*, and effected it by daylight; at about  $\frac{1}{2}$  mile distance from the above Point, we had  $\frac{1}{4}$  140 fm. during the remainder of the day, we plyed to the Northward, along the West Side of the Island *Camorta*, and

At Noon, were in the Latitude  $8^{\circ}$  or' N.

The Extremes of <i>Katchall</i> bearing	-	$\left\{ \begin{array}{l} S 43^{\circ}. 0 \text{ W.} \\ S 87. 0 \text{ W.} \end{array} \right.$
And those of <i>Camorta</i> .	-	$\left\{ \begin{array}{l} S 42. 30 \text{ E} \\ N 6. 45 \text{ W} \end{array} \right.$

This was just off the Mouth of a Cove, or little Harbour, in the West Side of *Camorta* about  $\frac{1}{4}$  mile.

At 7 PM we  $\rightarrow$  in 22 fm. water, at the NW Side of *Camorta*, which makes an Elbow, or Point, here; from which



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which there extends a *reef* of rocks, and *shoal water*, a League from the *Land*.

Th. 28. Moderate and cloudy weather.

At 5h. 45m. A M we weighed  $\rightarrow$ , and worked to the North Eastward, and found a very fine *Bank of Soundings*, for a great way.

At Noon, our Latitude was  $8^{\circ} 25' N$  \*. and about 10 miles from *Gamorta*  $\frac{1}{100}$  fm.

March

F. 1. The first and last parts of this day, fresh breezes and cloudy weather, the middle, light winds and clear.

All day employed working toward the Island *Tillang-chong*.

At Noon

The Extremes of that *Island* bore - from NNE to  $S 41^{\circ} 30' E$ .  
Its highest *Peak*, near the middle of the *Island*,  $N 88^{\circ} E$

The Latitude  $0 8^{\circ} 27' N$ . the water was very smooth, to the Westward of this *Island*, and we  $\rightarrow$  with our *stream*, in 40 fm. the bottom *fine white sand* and *Corralines* with *small shells*. The mean of 2 *Azimuths* and an *Amplitude*, here this Evening, give  $1^{\circ} 50'$  North Easterly for the *Variation*

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\* The *Bearings* have been neglected. R.



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*Variation of the Needle;* very little different from the Observation made near *Narcondam*.

Sa. 2. First part, light airs; middle, moderate; and latter a fresh gale at North.

This morning sent the Chief Mate, in our Pinnace, to go round the *North End* of *Tillangchong*, and *sound* there, and along the *East Side* of *It*; for the Current set so strong to the South Westward, that it would be impossible to get round it with the Vessel, without losing much time.

At  $\frac{1}{2}$  past Noon weighed  $\rightarrow$ , and steered to the Southward, along the *West Side* of the *Island*, in order to meet our boat at the *South End* of *It*;

At 4 P M saw the Pinnace, to the *Eastward* of the *Island*, under sail, and steering towards us.

At 6 P M the Boat came on board, upon which we bore up, and steered SbW. In rounding the *South End* of *Tillangchong*, we had regularly 42 fm. water, which depth continued near 4 miles to the Southward; we afterwards steered the same Course, and deepened to 65 fm; but upon altering the Course to SWbS, towards the *Island Trincatty*, the depth decreased regularly to 15 fm: So that the *Bank of Soundings* is continued between *Tillangchong*, *Camorta* and *Trincatty*; a circumstance not at all known before, and very well worth attention, from those who may have occasion to navigate this Tract.

Y

We



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We coasted along the *East Side* of the Island *Trincatty*, at a small distance, untill the *Entrance* to *Noncovery Harbour* was open to us, and then  $\rightarrow$  in 16 fm. water, the bottom *fair sand*; this was about midnight.

The Island *Tillangchong*, with the *small ones* adjoining to It, are situated between the Latitude  $8^{\circ}. 22' N$  and  $8^{\circ}. 33' N$ , the *high Peak*, upon the principal *Island*, being 12 Leagues, or 36 Miles, *East* from *Chowry*; whence It can be seen in clear weather. The *principal Island* is about 8 miles long, being a *high rugged ridge* of *Mountain*, resembling the *Comb* of a *Cock*, it is covered with trees and bushes, except where it is too steep for any thing to grow, and has no other *Inhabitants*, than such as are banished thence from the *other Islands*; a punishment which it seems they inflict upon such as commit great Crimes: happily for them, they acknowledge, they seldom have cause to put it in execution. There are many *small Islands* and *Rocks*, at the *South End* and *West Side* of *Tillangchong*; for the number and position of which I must refer to my Plan; where they were pricked upon the spot; along the *East Side* of *this Island* our boat found no *soundings*, with any Length of Line, at 10 fathoms from the shoar.

Su. 3. Moderate breezes in the NE Quarter.

At 6 AM we weighed  $\rightarrow$ , and steered into the *Eastern Entrance* of *Noncovery Harbour*, the least water we had was 5 fm. at  $\frac{1}{2}$  flood.

At



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At 9 we anchored in *Cross Harbour*, in 12 fm. Water, *soft ground*; here some *Danish Missionaries* had a few huts, or houses, which they called the *village of Erman*, and here they hoisted the National Colours, but at a small distance to the *Eastward* of them, a *Native* hoisted an *English union flag*, and came on board of us, as we were entering the *Harbour*, to tell us he was the most important *Man* in the *Place*, and pointed to his *Flag* as a proof of it.

Our water being entirely expended, and many of the *Casks* filled with Sea-water, the People were set to start it in the afternoon, and to prepare for watering the Vessel completely; at the same time we sent our Boat in search of a *watering place*, for there is only a sort of *draw well*, where the *Missionaries* live; In the Evening the boat returned, and reported that there was a *Spring* of *fresh water*, at the *South End* of the *Cross Harbour*, but at present it was not very convenient, there being no *reservoir* for the *water*, they were directed to supply that as they could.

M. 18. During these 15 days, our people have been employed repairing the vessel's sails and rigging, careening the vessel and paying her *boot tops*, blacking yards, &c. cleaning *Casks*, and filling fresh water. At the same time I have had an opportunity of copying, the *rough Plans* of our *Survey* so far, and of *surveying* and examining this most *excellent Harbour*.

The



The 8th Degree of North Latitude passes through the *Harbour of Noncovery*, and it is formed by the *Islands Noncovery* and *Camorta*, or rather is a Chasm in one and the same mass of Land; the *Harbour* is in a manner divided into two parts; of which, the *Eastern one* is the Least; and, from its form, is called *Cross Harbour*; the western part, is a very *large basen*, inclining to a square form, with indented sides, and here the largest Fleet of ships might lie moored, in the utmost security, from every wind, there are two *mouths*, or *Entrances*, to this *Harbour*; one to the Eastward, the other to the Westward; and on this account, is the most commodious place for a *War-Harbour*, that I have any where seen, for no ship could be wind-bound a moment, and for the same reason, ships may enter *It*, with any wind, at one side or the other. The *Western Entrance* is between two *high steep Lands*, like a *Gate Way*, it is not more than 100 fathoms wide, in the clear, and has 40 fm. water in *It*—It is exceedingly well disposed, by nature, to be fortified, for *Batteries* might be planted, on both sides, in so elevated a situation, that they would absolutely plunge their fire into ships in the *Passage*, and at the same time they could make no return to it; The *Eastern Entrance*, at first sight, appears to be much opener than the other, the Land being at a greater distance, but there are *Shelves of rock* (see the Plan) which project from the shoar, on both sides, and straiten the *Passage*, so that it is not absolutely wider than the other—This entrance has 5 fm. water in *It*, the least, and that is, before we come into the *Narrow*; for there  
it



it deepens to 8, 9 and 10 fm. with a *fine soft bottom*, besides the *Batteries*, which might be planted on either side, to secure this *Passage*, The *Point of Land*, which forms *Cross Harbour* on the *South side*, projects just in front of it, and here a *Battery* might be constructed so as to rake (*enfilade*) the *Passage*, and of course, throw ships offering to enter here, into the *most critical of all situations*, I mean, that of being confined in a *Narrow*, and exposed to a raking fire, without the possibility of returning it with Effect, or perhaps of retreating; there are many *Shelves of rock* in the *Cross Harbour*, where ships might be readily hove down \* to their own Guns, there being 5 or 6 fm. close to the Edge of them, and the water perfectly smooth in all weather, the depth of water, in this *Harbour*, is various, from 12 to 30 fm. the bottom *soft and stiff ground*:

Z

It

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\* Nothing ever struck me stronger than the uses that this *Place* might be put to; and I assert that a Fleet of ships of war might, in a few days, secure themselves from any attack, of even a superiour Enemy, and go through the whole business of their Repairs in the utmost security. R

I was at this Harbour in 1762 and communicated a copy of *Lindsay's Plan* to Governor *Pigot*, as well as to *Admiral Cornish* and other officers of the Squadron, particularly to the late Admirals *Parker* and *Kempensfelt*: the consequence of it was readily admitted by every body; Governor *Pigot* sent by me 30 sheep to stock the *Island*; and the *Admiral* told me he had written home to the Admiralty concerning it. *Admiral Parker* also informed me in England he had strongly pointed out the consequences of the possession; but it was overlooked: However the value of it still remains, though we may be debarred the exclusive Possession.



March 1771.

( 86 )

It flows  $\frac{1}{2}$  an hour past 9 o'Clock here, on *full and change* days of the *Moon*, and the *rise and fall* of the water is 8 or 9 foot.

The Island *Camorta* is an irregular *broken Land*, extending from  $8^{\circ}. 0' N$  to  $8^{\circ}. 55' N$ , and is of various widths, for which I must refer to my Plan, From *Its South East corner* (the *Entrance* to the *Harbour*) we see the *rugged Peak* of *Tillangchong* bearing  $N 8^{\circ}. E$ , distance 29 Miles, and from *Its North West Corner*, the *same peak* bears  $N 28^{\circ}. E$ . and in a line with the *North East Corner* of *Katchall Island*. *Camorta* has variety of ground, and is partly clear, and partly woody; its *North End* is pretty flat, but about the *Harbour* it is mountainous, particularly on the *West Side*, where stands the *principal Village*, at the foot of a *perpendicular ridge*; it is but thinly inhabited, according to the extent of ground.—Along the *East Side* of *Camorta*, lies the low and level Island *Trincatty*, which is a continued *Orchard* of *Beetle-nut* and *Coco-nut Trees*; The *Passage* between the *Islands* is *shoal water*, except at the *South End*.

*Noncovery Island*, which gives name to the *Harbour*, by which it is separated from *Camorta*, is of a triangular form, of no great extent, and almost totally covered with wood, and, of course, its *Inhabitants* are but few, and its produce, besides *Timber*, almost nothing, if we except the *Hogs*, which run wild in the woods, every stone we see here is *Lime Stone*, and of course *Buildings* might be raised without much Cost, the materials being all at hand, Iron excepted.

We



March 1771.

( 87 )

Tu. 19. We have had heavy squalls, of wind and rain, attended with Thunder and Lightning, very frequently, whilst we have been in this *Harbour*; but during these last two Days, the wind has been Northerly and moderate.

At Noon we unmoored, weighed  $\rightarrow$ , and failed into the *Western Branch* of the *Harbour*, and  $\rightarrow$  in *It* in 17 fm. *soft Ground*,  $\frac{1}{4}$  Mile South West from *Oyster rock*\*.

W. 20. The wind at North, and moderate weather.

At 6 A M we weighed  $\rightarrow$  and failed out, through the *Western Mouth* of *Noncovery Harbour*; here, we had the *Island Katchall*, in front, at about 4 miles distance; It is entirely covered with wood, and, we are told, has on that account, but few inhabitants.

At 8 A M we hoisted in our Yawl, and stood to the Southward.

At Noon the Latitude O  $7^{\circ} 50'$  N.

The SE Extreme of <i>Noncovery Island</i> bearing	N $28^{\circ} 0'$ E
The Western Extreme of <i>Camoria</i> , near the <i>Harbour Mouth</i> ,	N $17^{\circ} 0'$ W
The Extremes of <i>Katchall</i>	$\left\{ \begin{array}{l} \text{N } 41^{\circ} 30' \text{ W} \\ \text{N } 80^{\circ} 0' \text{ W} \end{array} \right.$
South East point of <i>It</i>	N $76^{\circ} 0'$ W
$\frac{1}{4}$ Miles distant	

At

---

\* So called from the multitude of *Oysters* we got upon it; Upon the North side of it, at 10 foot under water, there grew the most beautifull *Coralline Tree* I ever beheld; it was in full bloom, the tops very much resembling *Asparagus*, but of a beautiful blue Colour, which, upon the white stems, was very pretty. R



March 1771.

( 88 )

At 1 P M Saw, from the deck,

The Northmost of the Great Sambelong Mlands\* bearing S.

At 10 Set we were about a League from Ditto.

Th. 21. A pleasant gale in the NE Quarter.

At 10 Rise

The Northmost Sambelong bore

from S 47° 30' E  
to S 88. 0 E

Three small Islands named

{  
Trice  
Track  
Meros  
} bore {  
N 86. 0 E  
N 84. 0 E  
N 63. 30 E

We run along by the South Side of these Islands, and afterwards coasted along the North Side of the Northern, or Little, Sambelong, in doing which, we observed that

The Eastern Extremes of Meros and Katchall bear  
and opposite

N 14° W

Hence, with their Latitude, we obtain the width of Somberere Channel, which is the Passage between Noncovery and the Sambelongs. At Noon our Latitude was 7° 23' N.

The Extremes of the Northern Sambelong bearing

{ S 11° E  
N 58. E

Meroé:

\* i. e. Nine Islands, The Malay Name for the Nicobar Islands. R.



March 1771.

( 89 )

Meroë bore	N 27°. 0' W
Trice	N 10. 30 E
Track	N 20. 30 E

In the Afternoon, we coasted along the *West Side* of the *Little* or *Northern Sambelong*, remarking the shutting on of *Trice*, *Track* and *Meroë*, with the *North West Point* of *that Island*, and also the opening of *Candle Island*, and the *Southern*, or *Great Sambelong*. The *Passage*, which separates the *two Sambelongs*, here has obtained the name of *St. Georges Channel* (*much good may his Saintship get by it*) and here, we found a very violent Current setting through *It*, to the Westward, with many Eddies, a sure sign of a *rocky uneven bottom*; we therefore bore over to the *West Side* of *Great Sambelong*, and  $\rightarrow$  in 17 fm. water, about 2 Miles from the shoar,

The *Northern Sambelong* is very Mountainous, and woody all over, it appears steep, on all sides that we have seen: none of the people came off to us, in their *Bolongs*, as they did at the *other Islands*, although we examined *two sides* of *It* at a small distance, yet it is said to have many Inhabitants.

Tu. 22. Light breezes and hazey, all Day

At 5 A M. we weighed  $\rightarrow$  and steered to the Southward, Coasting along the *West Side* of the *Great Sambelong*, in a depth of from 15 to 20 fm.

At Noon Our Latitude O 6°. 55' N

A a

The



March 1771.

( 90 )

The Extremes of *Great Sambelong* bearing from N to S  $43^{\circ}$ . E

A very high peaked Mountain upon Ditto N  $43^{\circ}$ . E

This *Peak* by an Observation (*at  $\rightarrow$  last night*) lies in the Latitude  $7^{\circ}$ .  $08'$  North. In the Afternoon our Course was SSE, and SE, along shoar; here is a very extensive *Bank of Soundings*, at the *South West* part of this *Island*, on which we had generally from 17 to 25 fm. the bottom *coarse sand, shells and rotten stones*.

From 7 P M untill Midnight we had from 28 to 33 fm. the bottom *fair sand*.

Sa. 23. From midnight till 10 A M we steered ESE, at which last hour the wind shifted to SE, and brought a very heavy squall (a *Sumatra*) of wind and rain, which continued near an hour.

At Noon we had no Observation, and for the remainder of the day, light Airs and Calms, with much Thunder and Lightning at a distance.

Su. 24. Light Airs and Calms throughout, we begin to suspect, that the *surveying* Business is at an end, for the Season, on this Side of the *Bay*, and the Monsoon about to shift.

At  $\odot$  Rise

The *Great Sambelong* bore

N  $7^{\circ}$ . W  
N  $47^{\circ}$ . W

At Noon the Latitude  $0^{\circ}$ .  $45'$ . N with

The



March 1771.

( 91 )

The Extremes of Great Sambalong bearing

{ N 37°. 30' W  
{ N 87. 0 W

The *Island* extends therefore, between the Latitude 6°. 46' N, and 7°. 13' N; in length, about 27 Miles, It has a considerable breadth, at the *North End*, but tapers to a *Point almost*, to the Southward. The *North End* is also lofty Mountains, but the *South End* is low and level, and the whole appears to be an entire wood. Our account is very incomplete here.

M. 25. The first part, a moderate breeze at NE.

The middle we had a hard squall from the South Eastward, attended with much Thunder and Lightning;

Latter part, dark cloudy weather and gross haze, no Observation.

Tu. 26. Light variable breezes in general, with heavy Clouds, and much Thunder and Lightning all round.

At Noon had a fort of Observation the Latitude 5°. 56' N.

W. 27. Light variable airs and calms, alternately, with a few flying squalls, and very hazey; by Observation we were still in Latitude 5°. 56' N. but the Horizon so thick, we could not see  $\frac{1}{2}$  mile distance.

The



March 1771.

( 92 )

Th. 28. The wind and weather as yesterday, with intense heat; we have made by account 45 Miles *Easting*, and have been these 3 Days in the Latitude of *Pullo Rondo*, but the exceeding gross haze prevents our seeing any Object at a mile distance.

To Day our Latitude was the same as Yesterday by Observation.

F. 29. A continued calm from 1 A M till Noon, and thence till Midnight, a light Air at N E. Latitude O  $5^{\circ} 51' N$ , much Thunder and Lightning.

Sa. 30. Light airs from the NE, till 7 P M, after which the Breeze freshened a little, Lat. O  $5^{\circ} 37' N$ , which is that of the *North West* part of *Pullo Brasse*, See nothing of Land.

Su. 31. A fine gale, from NbE to NE, with some flying squalls and Lightning; having steered SSW and SW untill Noon the Latitude was  $4^{\circ} 56' N$ ; by which it appears, that we have been drove by the Current, to the *Westward* of all the *Acheen Islands*, without seeing them, by reason of the haze and Fogs; it is certain that we could with the present gale, haul a wind to the Eastward, make the Coast of *Sumatra*, and go in, through the *Surat Passage*, to *Acheen Head*; but as this would determine nothing of *Its Situation*, with respect to the *Great Nicobar Islands*, our going there becomes needless; and being in no want of water or provisions, we therefore take the advantage of



March 1771,

( 93 )

of the present favourable gale, to make the best of our way to the *Coast of Choromandel*: dating our departure from yesterday at Noon, when we were in the Latitude of *Pullo Brasse*, and, we suppose, 9 or 10 Miles to the *Westward* of It.

It will be needless to insert the remarks on the Passage towards the *Choromandel Coast* in this Journal, as it would be only copying the Snow's Log-Book\*.

April.

Tu. 16. A fine fresh Southerly Gale.

At 11  $\frac{3}{4}$  P M we struck *Soundings*, North Eastward from *Pondicherry*; the depth 25 fm. and ground *coarse grey sand* and *broken shells*.

W. 17. Wind as yesterday.

From midnight steered NNE, and NbE.

At 9 A M Saw the *Hills of Sadras* and *Mount Saint Thomé*, and shortly after saw the *Ships* in *Madras Road*.

B b

At

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\* As the Log-Book is lost, I wish that the state of the Winds had been entered here, because a Southerly Circuit was taken, in order to secure a fair wind to Madras, and the manner of doing this, is not so generally known, except to those, who have been long acquainted with the Monsoons. R



April 1771:

( 94 )

At Noon the Latitude  $13^{\circ}.06' N.$

The *Flag Staff* of *Fort St. George* bearing WNW about 5 Miles distant.

depth of water 16 fm. the bottom *stiff Clay*.

At 1 P M We came to  $\rightarrow$  with the B. B. in 10 fm. water in *Madras Road*, the *Flag Staff* bearing West.

P. S. Here the Journal ends, and the remarks, upon the remainder of our trip, was never taken down, but in the Log Book; the reason was this, we had only to carry a *Line of Soundings*, along a well known shoar, from *Fort St. George* up to the *Road of Ballafore*, in which track, very little new was likely to occur.—Indeed the only alteration that happened, was in the *Shoals* of *Armagon*, the *False Point* of *Divi*, and the *Point* and *Bank* of *Gadavary*, or *Gardaware*; all which my Plans will shew sufficiently distinct.

J. R.



E R R A T A.

Page	24	line 1.	for	6 $\frac{1}{4}$	read	6 $\frac{1}{2}$
	30	note	add R			
	31	last line	-	we! earn	-	we learn
	51	note	} add R			
	52	note				
	57	l. 7	-	Coral	-	Coralline
	63	l. 13	-	then	-	when
	78	note	-	altered	-	entered
	83	l. 3	-	Erman	-	Ermam







# A P P E N D I X

to

Capt. *Ritchie's* SURVEY

of the

## BAY of BENGAL

containing

Capt. *Hayter's* Instructions for the *West Coast* of *Ava* with *notes* by Capt. *Walter Alves*.

Capt. *Alves* Journal in the *Snow Viceroy* 1759.

Pilot *Alexander Wood's* letter concerning his Draught of the *Coast* of *ARACKAN*; &c.

Mr. *Barth. Plaisted's* Instructions for the *Coast* of *CHITTAGONG*.

Capt. *Ritchie's* Instructions for the *River* of *CHITTAGONG*.

*Published from MSS.*

by

*Dalrymple.*

L O N D O N:

Printed by *GEORGE BIGG*, 1785.



A P P E N D I X

March 1782

The following Directions for navigating

Capt. Ridd's Survey of the Bay

and the adjacent Capes of the Bay

BAY of BENGAL

containing

Capt. Ridd's Instructions for the West Coast of Africa with notes by Capt.

W. Ridd

Capt. Ridd's Instructions for the East Coast of Africa with notes by Capt.

*For Banks*

Mr. Ridd's Instructions for the Gulf of Chittagong

Capt. Ridd's Instructions for the Bay of Chittagong

Printed from MS.

by

George Bick

L O N D O N

Printed by GEORGE BICK



March, 1785.

**T**H E following DIRECTIONS for navigating The Coast of AYA, were drawn up by the late Mr. George Hayter, then an Officer in the *Worcester*, and afterwards Captain of the *York* Indiaman: I received them from my deceased Friend the Honorable Thomas Howe, but I also received, from the late Capt. Walter Alves, a Copy in which he had, from his own observations, made several alterations and additions, I have given these in notes, marked, *W.A.* I have added a few notes marked *Q*.

Unwillingness to deprive Capt. Hayter of the merit of his Work, prevented me substituting Capt. Alves's amended Copy.

I have added Capt. Alves's Log of the Snow *Victoria* along this Coast: I wish every Log contained as much information, in as few words; but the greater number are I find vacant of instructive remarks or useful Bearings; having seldom any but Extremes, which are inexpressive and, unless the Vessel be very near shoar, totally useless.

By



By the *Bengal Consultation*, where Pilot *Wood's* letter is entered, it appears *Four Charts* were delivered in; of the *Entrance* into the *Woods*, of the *Coast* of *Chittagong* of the *Entrance* to *Arrackan River*, and of the *Coast* of *Pegu*; none of these now remain at the *India-House*: it appears they were made in the *Dunbarton Sloop*, and therefore are probably what I have engraved from the MSS. of *Jeremiah Lawrence* obligingly communicated to me in 1762 by Captain *Alexander Hume*.

The different copies of Captain *Plaisted's* Instructions do not exactly agree in names; The various *Charts* are still more discordant, but my present state of health does not allow me to make a table of comparison.

INSTRUCTIONS



INSTRUCTIONS for the *Channel* between *Diamond Island* and the *Negeada*, or *sunken Rocks*; from the *Pagoda Point*, along the *Coast* of *AVA* and *ARICAN*, towards *BENGAL*, in the *Eastern* or *NE Monsoon*.

SHIPS coming from the *Eastward* <sup>a</sup> endeavour to fall in, about 9 or 10 Leagues to the *Eastward* of *Diamond Island*, which lies in the *Lat.*  $15^{\circ}. 42' N.$  <sup>b</sup>

In the *Lat.*  $14^{\circ}. 30' N.$  and 23 Leagues to the *Eastward* of *Diamond Island*, you will have *Soundings* in 65 fm. water, *fine blackish Sand*, when you must endeavour to get to the *Northward*, having regard to the *Tides* out of the *Bay of Martaban*, which I observed set stronger to the *Westward* than to the *Eastward*.

In *Lat.*  $15^{\circ}. 24' N.$  and about 10 Leagues to the *Eastward* of *Diamond Island*, you will have 20 fm. water *sand and small shells*; and, if clear weather, you may see <sup>c</sup>

A

Land

---

<sup>a</sup> In December Ships coming from the *Eastward* endeavour to fall in with the *Coast* of *PEGU*, a little to the *Eastward* of *Barague Point*, from which runs out a *long Sand* that may be safely rounded in 9 and 10 fathom water, in *Lat.*  $15^{\circ}. 25' N$  or thereabout. *WA.*

<sup>b</sup>  $15^{\circ}. 54' N.$  *WA.*

<sup>c</sup> The low Land, which is between *Porean Point* and *Barague Point*.



Land to the NNE, from your mast head, which is part of the *Island Baragoo*, and is *low Land* with trees: I would advise to steer as far northerly as the wind will permit, till you shoal to 10 fm. or, if apprehensive of the wind being scant, to 7 fm. *soft ground*; keep in that depth of water (not under it) and, when you have sight of *Diamond Island*, steer a little wide of it, keeping the same depth of water; when got *Diamond Island* to bear of you NWbN, it will be best to haul more off from *It*, and increase your depth of water to 9 or 10 fm, when, if you steer WNW, it will keep you in, or near, that depth, having regard to the *Tides*, till you bring *Diamond Island* to bear N of you, about 4 miles distance, take care not to exceed 10 fm, in which depth, <sup>a</sup> you will have *soft ground*. If you should be obliged to turn it through, take care not to <sup>b</sup> deepen your water above 10 fathom, nor shoal it under 7; if you find, in steering WNW, your water deepen or shoal, correct your Course accordingly.

From the SW Point of *Diamond Island* there runs a *shelf* of rocks, <sup>c</sup> (at *low water* very little above the water, and most of them covered at *high water*) near  $1\frac{1}{2}$  mile from the *Island*.

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<sup>a</sup> Or 9 fm. *WA.*

<sup>b</sup> Not to stand nearer the *La Guardas* than 10 fathom, nor *Diamond Island* than 7 fathom. *WA.*

<sup>c</sup> A *Reef* of Rocks, just above water, from the *Island* about  $1\frac{1}{2}$  mile. *WA.*



*Island*, from which <sup>a</sup> runs a *dangerous reef* to the SSW 6 or 7', on which is very *irregular Soundings*, so that it is not safe for any ship to venture over *It*, as there is *many Rocks*, on which is but 2½ fm. water.

When the *Diamond Island* is N from you, about 4', and you in 10 fm. water *mud*, steer WbN, in much the same depth, taking care not to shoal it, <sup>b</sup> till you bring the *Hill*, on *Little Negrais*, very near on with the *Eastmost Point* of *Diamond Island*; then haul away to the Southward, so as to keep them in the same position, taking care *not* to *shut in*, any part of *Negrais Hill* with the *Island*; this will carry you, along the *East side* of the *Reef*, at about ½ a mile distance <sup>c</sup> in from 10 to 12 fm. water: in steering this Course, soon as ever you deepen your water to 15 fm. and no ground with your hand line, haul to the Westward till you again get *Soundings*; taking care not to go under 10 fm. in rounding the *reef*; If you have *Little Negrais Hill* near all *shut in with the Island*, and in hauling to the Westward you shoal suddenly, haul off immediately <sup>d</sup> South or SSE; for when you have the Westermost part of *Little Negrais Hill*, just opening with the Westermost *Point* of *Diamond Island*, there is a *dangerous rock*, which

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<sup>a</sup> From which about 6 or 7 miles to the SSW is the *La Guardas*, a very dangerous *Reef* of *Rocks*, which all Ships endeavour to avoid; In the SW Monsoon the Sea *breaks* very high on it; but the *Breakers* do not appear in the NE Monsoon, the wind being always off Shoar. *WA.*

<sup>b</sup> Not to shoal it much. *WA.*

<sup>c</sup> At near half a mile distance, in 10, 11 and 12 fathom. *WA.*

<sup>d</sup> SSE *WA.*




which <sup>a</sup> I take to be the *Eastmost point*, or part, of the *Pitch* of the *Reef*; East from this Rock, less than a cables length, you will have 7 fathom water, and West, or about WbS, from it, lyes *another rock*, <sup>b</sup> which you are abreast of, when you have the *Westermost Point* of *Diamond Island* on with the *Hollow* on *Little Negrais Hill*; I would advise by all means to send your Boat to lye on the *Eastmost Pitch* of the *Reef*, or near it in 6 or 7 fm. then you may round her about 2 Cables length distance, by which means you will be certain to avoid a *dangerous rock*, that lyes between the pitch of this *Reef* and the *Negeadas*, or *sunken Islands*, and has 14 fm. at  $\frac{1}{2}$  a cables length from it, and an instance which several ships have struck\* (to mention one) His Majesty's ship *Exeter*, commanded by *Lord Harry Pawlett*, in the year 1748, the month of November the latter end.

In rounding the *Reef*, at that distance, you will have from 10 to 11  $\frac{1}{2}$  fathom, <sup>c</sup> take particular care, after you are past the *Westermost Rock*, which you will know by the marks for it, (aforementioned) not to shoal your water by hauling to the Northward, till you bring the *Westermost Point* of the *Great Negrais* to bear N  $\frac{1}{4}$  E, and *Diamond Island* NE  $\frac{1}{4}$  E; you may then steer <sup>d</sup> for the *Westermost*

<sup>a</sup> I. WA.

<sup>b</sup> *Dangerous Rock*. WA.

\* So in the Copy. 

<sup>c</sup> 10 and 11 fathom mud. WA.

<sup>d</sup> Directly for the *Western Point* of *Great Negrais*. WA.



termost of *Negrais* which is termed *Cape Negrais*, having regard to the *Tides*, this course will carry you along <sup>a</sup> the West side of the *Reef*, in 9, 10, 11, 12, and to 13, fathoms.

Observe that after you have passed the *Westermost Rock* aforementioned, and in 10 fm. water, where we  $\rightarrow$ , about WSW 1 mile distant, lyes a *bank*, on which had but 7 fm. *hard ground*, to the WSW increased the depth to 14 fm. not having time to spare, could not examine it by sounding further, but I do not think unreasonable to suppose, that this *shoal* may be near adjoined to the *rock*, beforementioned, on which the *Exeter* struck in the year 1748.

The West Point of Great Negrais bearing	N $\frac{1}{2}$ E Easterly
The South Point of the Island Porceno	ENE $\frac{1}{2}$ E.
The Negeadas	{ from S Westerly to S $\frac{1}{2}$ W Westerly
The Little Negrais Hill, very near half way, between Diamond Island and Pagoda Point.	

In keeping in 9 $\frac{1}{2}$  and 10 fm. on the *Reef* you will be sure to avoid it.

When you bring *Little Negrais* <sup>b</sup> within half its length on with *Pagoda Point*, you will have 13 fm. and *Diamond Island* from EbS to EbS $\frac{1}{2}$ S <sup>c</sup> you may then steer directly for  
B Pagoda

<sup>a</sup> Along part of the W. side of the *Reef*. WA.

<sup>b</sup> *Little Negrais Hill*. WA.

<sup>c</sup> *Diamond Island* about EbS $\frac{1}{2}$ S. WA.



*Pagoda Point*, which will bear about  $NE\frac{1}{2}E$ <sup>a</sup> you will gradually shoal your water to 6 fm. which is a good depth to round the *Point* in, at about 1 or  $1\frac{1}{2}$  mile distance, though when It bears about W from you, you will find that depth a great deal nearer.

If the wind should oblige you to go more Westerly, so as to shut the *Hill*, on *Little Negrais*, in with *Pagoda Point*, take care<sup>b</sup> not to bring the *Point* more Easterly than ENE, nor borrow nearer the shoar than 5 fm. on account of a *shoal*, which runs WNW from *Pagoda Point*, above a<sup>c</sup> league: in this depth you will be about 4 miles from the shoar, if you are not to the Northward of the *red cliffs*, where the shoals end, and then you will find deeper water, having 10 fm. within 2 miles of the shoar.

You may  $\rightarrow$  in about 6 fm. <sup>d</sup> the *Point* bearing NNW to WNW; if you shut the *Point* more in, the Channel grows narrow; In coming out steer such a Course as to make good  $SW\frac{1}{2}W$ , allowing for the Tide,

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<sup>a</sup> But if you intend to go into *Negrais*, bring it  $NE\frac{1}{2}N$  or  $NEbN$ , and run in with it at that bearing; you will perhaps have some casts *hard ground*, depth 6, 7 or perhaps 5 fm. on the *tail* of the *Sand* that runs out from *Little Negrais*, but you need not be apprehensive of danger, in the NE Monsoon, as you have the Wind, generally, off shoar, and can run into deep water when you please: There is a remarkable *Rock* off the *Point*, about a quarter of a mile distant from It: Keep in 6 or  $6\frac{1}{2}$  fms. and you will round the *Point* in safety at about half a mile distant from it. *WA.*

<sup>b</sup> In a large Ship. *WA.*

<sup>c</sup> 4 or 5 miles. *WA.*

<sup>d</sup> You may  $\rightarrow$  about  $1\frac{1}{2}$  mile from the *Point* in 6 or  $6\frac{1}{2}$  fms. *muddy ground*, The *Point* from N to NW of you. *WA.*



Tide, \* which will carry you out, in 6 fm. or  $6\frac{1}{2}$ , and when *Diamond Island* bears  $SE\frac{1}{2}E$  or  $SEbE$ , if you are within the *Sand* that stretches to WNW from *Pagoda Point* and as far to the Northward as the Northernmost red cliff you see.

To *Cape Negrais* you may, if you are obliged to turn it, shoal your Water to about 10 fm, when you will be within 2 or  $2\frac{1}{2}$  miles of the shoar, and not to stand farther off than 18 or 20 fm. at farthest.

The *Rocks* called *Buffaloes*, <sup>a</sup> are several single high  
Rocks,

\* There is obviously some mistake here, probably in transcribing. *D*

Capt Alves says "In coming out steer so, having regard to the Tides, (which here set E and W) as to make about a  $SW\frac{1}{2}W$  course, which will carry you out, in 6 or  $6\frac{1}{2}$  fms. and when *Diamond Island* bears  $SE\frac{1}{2}E$  or  $SEbE$  you are without the *Sand*, which runs out WNW from *Pagoda Point* and as far to the Northward as the Northernmost Red Cliffs you see, to *Cape Negrais*, you may, if obliged to turn it, shoal your water to 10 and 8 fms. and not go farther off shoar than 18 or 20 fms. at farthest." *WA*. The Sense of this Sentence may be very much varied by pointing it differently. *D*

<sup>a</sup> The *Buffaloes* are several *Rocks*, at a small distance from one another, they extend N and S for about  $2\frac{1}{2}$  miles and are about 3 miles from the *Main*, and lye N. from *Cape Negrais* in  $16^{\circ}$ .  $24'$  N you may pass without them at about  $1\frac{1}{2}$  mile distance in 14 fm. soft ground. Not above 3 miles to the Northward of these *Rocks*, but more in-shoar, are three or four *Islands*, on the two Northernmost of which, are many Coco-nut Trees: The Northernmost ought not to be approached without great caution, for there appears to be dangerous Reefs of *Rocks* all round it, a long way off. *WA*.



*Rocks*, at about  $2\frac{1}{2}$  distance from the shoar, several of them *white*, and extend from N to S about  $2\frac{1}{2}$  or 3 miles, they lye N from *Cape Negrais* in Lat.  $16^{\circ} 14'$  N you may pass them at about  $1\frac{1}{2}$  mile distant, and you'll have at that distance  $13\frac{1}{2}$  and 14 fm. water. From the *Buffaloes*  $N\frac{1}{2}E$ , distant 10 miles, lyes *an Island*  $2\frac{1}{2}$  or 3 miles from the shoar, and is called *Broken Island*, as at a distance it appears craggy and irregular, <sup>a</sup> especially from the Northward; as you come up with this *Island*, you will gradually deepen your water, and, when abreast of *It*, will have 25 fathom *mud*, within 4 miles of *it*.

When abreast of this *Island*, you will just get sight of the *Calventura Rocks* which bear  $N\frac{1}{2} W$  from *It*.

If the Winds and Currents are favorable to you, that you sail *without them*, endeavour to keep in 40 to 50 fm. which depth, to the Westward of *them*, you will find very near; <sup>b</sup> for which reason it is adviseable to keep a good Offing in the night, and frequently use your lead and line; for the Currents are very subject to change, as has been often experienced: Ships, that go *without them*, seldom see the *Land*, unless at a very great distance, till they make the *Island Chedubub*, which lies in Lat.  $18^{\circ} 44' N$ ; so much for going without the *Calventuras*: but I confess

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<sup>a</sup> Craggy and like several *Islands* at a small distance from one another. *WA.*

<sup>b</sup> Very near the *outermost* of these *Rocks*. *WA.*



feels the going *within* these *Rocks*, by much the most expeditious method, as there is good  $\rightarrow$  along shoar, and being more near the *Land*, are more likely to meet with *Land winds*; which winds blow but a little distance from the *Land*; beside the advantage of  $\rightarrow$ , when both Winds and Currents are against you, at the same time being more out of the Current's way.

In January 1758 going this Passage, we were, from the *Broken Island* in Lat. about  $16^{\circ} 30' N$ , 5 Days beating, and got but 6 miles; when seeing a small vessel pass within the *Calventuras*, stood in and spoke with her, they told us it was a *good passage*, we stood in shoar, and the next day turned through, the wind being right an end.

In December following, the same year, made *Cape Negrais* the 4th, did not stretch in nearer than 6 Leagues, got sight of the *Calventuras* the 8th, and the 12th, finding we had gained but very little ground, stood in abreast of the *Broken Island*, and came to  $\rightarrow$  in 23 fm. *mud*, to wait for the *Land wind*; kept in shoar, as the year before, and the 16th was abreast of the *Northermost part* of the *Island Chedubub*; the 19th was off *Aracan Gut*, when we met a small Country Vessel, who had been one month and four Days from the *Negrais*, and had kept off the *Land*, only keeping it in sight; the first time going along shoar, did not sail in the night, (as this *Coast*, both by our *Pilot* and the *French Directory*, is said to be *dangerous* and



no  $\rightarrow$ ) that we were 9 Days to the *North part* of the *Island Chedubub*, but to return.

From the *Broken Island* NNE, about 6 or 7 miles, lyes a *small Island* off which is a *ledge of rocks*, running from it to the SW near 2', on which the Sea *breaks sometimes*; and near the *Island* some *rocks* appear, *just above* the *water*.

From the *Broken Island* NbE or  $N\frac{1}{4}E$  about 8 or 9 miles lyes a very remarkable *single high black rock*, about  $3\frac{1}{2}$  or 4 miles distance from the shoar.

When you are past *Broken Island*, I would not advise you to go nearer the *Reef of Rocks* than <sup>a</sup> 23 or 25 fm, and when you are to the Northward of the *single high rock*, 3 or 4 miles, you may shoal your water on the *Main* to 16 fm. without fear; when you will be about 4' from the shoar; there is a very good and clear *Passage* between the *Calventura Rocks* and the *Main Land*;

These *Rocks* are in *three Divisions*, the *Northmost*, which <sup>b</sup> at a distance appears like a *single Rock*, is *one large* and *four* <sup>c</sup> *small ones* near it, and lyes in Lat.  $16^{\circ}. 50' N$ . The *Southmost Calventura* lyes from the *Northmost*  $SE\frac{1}{4}S$  <sup>d</sup> in Lat.  $16^{\circ}. 46' N$ .

*This*

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<sup>a</sup> Than 25 fms. *WA*.

<sup>b</sup> Is the *outermost*. *WA*.

<sup>c</sup> 4 or 5 *small ones* near it, This lyes in Lat.  $17^{\circ}. 0' N$ , *WA*.

<sup>d</sup>  $SE\frac{1}{4}S$  and in Lat.  $16^{\circ}. 52' N$ . *WA*.



*This* is by much the largest, and at a distance appears as one, but is *one large and two small ones* : <sup>a</sup> is very remarkable, having a *passage* through it, like the *Arch* of a *Bridge*, and are all *Three* covered with wood ; From *This*  $N\frac{1}{4}W$  about 2 miles <sup>b</sup> lyes the *other Division*, which is a very *high single rock*, or may be called a *little Hill*, being covered with wood ; when *It* bears  $WbS$  or  $WSW$  of you, it has a very great resemblance of a *Man's face and head* : *This* *Island* lyes from a *Sandy Point* on the *Main*  $WbS\frac{1}{2}S$  7 or 8 miles, The *Southmost* of the *Calventuras* is about 3 Leagues from the *Main*. In going through this *Channel*, if you have a leading wind, keep *mid Channel*, and you will have 20, 22, 23, and 24 fm. *soft ground* ; if you have *Northerly* winds, and obliged to turn it through, you need not be under any apprehensions of *Danger*, if observe the following *Directions* ; Take care, before you bring the *Southmost Calventura* to bear about  $WNW$ , not to shoal your water, on the *Main*, under 13 fm. *hard sand*, nor towards the *Island* under 16 fm. *hard ground*, which you will have when it bears about  $NW$ , distant 2 miles from you. When you bring the *Island*, or *Rock*, to bear more *Westerly* than  $WNW$  of you, dont venture to shoal on the *Main* under 16 fm, on account of a *white rock*,  
above

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<sup>a</sup> *Two* small ones close to it : *one* of the small ones is very remarkable, having a *passage* through it, like the *Arch* of a *Bridge*, all of them are covered with brush and wood. *WA.*

<sup>b</sup> Near  $2\frac{1}{2}$  miles. *WA.*



above water, about the size of a longboat, and lyes East from the *Southermost Calventura Rock* or *Island*, and one mile distant from the *Main*, one mile distant from this *rock* to the Westward, is *foul ground*; you shoal from 15 fm. *soft ground* to 8 *hard ground* at one cast, as we sounded in our boat, and from thence close to the *rock*, very irregular soundings of 8, 5, 6, 7, 5, 8, 5 *rocky*, till within a quarter of a mile of the *Rock*, at which distance, or rather more, are several *Rocks*, near the *surface* of the *water*,<sup>a</sup> on which the *sea breaks*; had at about 8 yards distance from them, 4 fm. and  $4\frac{1}{4}$  water; along side the *White Rock*, that we could just touch it with our Oars, had 3 and  $3\frac{1}{4}$  fm. water.

In standing towards the *Calventuras*, dont shoal your water under 18 fm. *hard ground*, which depth you will have at  $1\frac{1}{2}$  mile distance from the *Southmost*; and at 1 mile distant from the *Northmost*, of the *two Westermost Divisions* of *Calventuras*, the true *Channel* is *soft mud*; you may borrow within 2 and  $2\frac{1}{2}$ <sup>b</sup> miles of *Sandy Point* on the *Main*. This *Point* has several *Black Rocks*, on the *Beach*, close to, and some in, the *water*, from *this Point* to the *Northward* runs a *Reef of Rocks*,<sup>c</sup> near a mile distance from the shoar, with

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<sup>a</sup> Even with the surface of the water, or rather under. *WA.*

<sup>b</sup>  $2\frac{1}{2}$  miles. *WA.*

<sup>c</sup> *Reef of Rocks* about a mile, and about half a mile distant from the shoar, within them appears like the *Entrance* of a *River*, and very remarkable *large high Trees*; about 4 miles NbE from this *Point* lyes a *Sandy Island*, with trees on it, about



with Trees on *It*, To the Southward of this *Bank*, or *Island*, on the *Beach*, lies a remarkable *Rock*, and looks like a *Building* on the shoar; In turning don't venture nearer this *bank* than 12 fm, which you will have within  $1\frac{1}{2}$  mile distance from *it*; if in the night time, and a turning Breeze, would not advise you to shoal under 20 fm, and not farther off than 26 fm, till you are four Leagues to the *Northward* of the *Calventuras*.

As you get more Northerly, you find the water rather deeper, when you may stand off to 35 fm, <sup>a</sup> but to be sure not to get out of soundings, for fear of its falling calm; you may stand in again to 23 and 22 fm, in which depth you will be about 4 miles from the shoar. There are several small *Islands* along this shoar, and very near the *Main*; one pretty *Long one*, extending N or\* S, or thereabouts, near a League; the *Body* lies in Lat.  $17^{\circ} 4' N$ ; off the *North end* of *it* lyes a *Sandy Island*, with a remarkable large Tree on it, off which run some *rocks* to the Northward, a little distance; off the *South End* of this *Island* likewise run some *Rocks*; they break at near  $\frac{1}{2}$  a mile distant from *it*; abreast of this *Island*, at about 5 miles distance, you will have 25 fm. soft ground.

D

From

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about a mile from the Shoar. To the Southward of this *Island*, on the *Beach*, a remarkable *Rock* that looks like a *Building* on the Shoar: In turning don't venture nearer that *Island* than 12 fms. which you'll have about  $1\frac{1}{2}$  or 2 miles distant from *it*. *WA*.

<sup>a</sup> And in, to 25 or 23 fms, in which depth you will be about 4 miles from the shoar. *WA*.

\* So in the Original, qu? N and S.

*B*



From the *Northernmost* of the *Calventura Rocks*, about  $N\frac{1}{4}W$  or North Westerly, in the Lat.  $17^{\circ} 22' N$  <sup>a</sup> lye the *Church Rocks*; they are *one Large* and *three small ones*; they lye, at least, 5 Leagues from the *Main*, the *large one*, which is likewise *high*, when it bears NW of you, appears like a *Circular Fortification* with a *Building* in the middle of it: *Two* of the *small ones* lye about EbN from it, the other at W or  $W\frac{1}{2}S$ , and very near it: when they bear from SWbW to SSW <sup>b</sup> the *large one* has very much the resemblance of a *Country Church* with a *square Tower*, <sup>c</sup> from whence they get their Name: *within* these *rocks*, at about 2 miles distance, <sup>d</sup> you'll have 36 <sup>e</sup> fm. water *soft mud*, the *Main* here appears to be without Danger, but close to, are several *Rocks*, above water, and some <sup>f</sup> small *Islands*; 4 Leagues to the *Northward* of these *Rocks* you may near the shoar, within 2 miles, or thereabouts, you will have  $14\frac{1}{2}$  or 15 fm. *mud*. <sup>g</sup>

From the *Church Rocks*, about  $N\frac{1}{4}W$ , lyes a *large Island*,  
the

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<sup>a</sup>  $N^{\circ} Wy.$  in Lat.  $17^{\circ} 36' N.$  *WA.*

<sup>b</sup> About SW. *WA.*

<sup>c</sup> At the *West End* of it. *WA.*

<sup>d</sup>  $2\frac{1}{2}$  or 3 miles distance. *WA.*

<sup>e</sup> No less than 35 or 37 fms *muddy ground*. *WA.*

<sup>f</sup> Many small *Islands*. *WA.*

<sup>g</sup> To wait for the Land-Wind, which in general we found faint. *WA.*



the *Body* of it in Lat.  $17^{\circ} 57' N$ , <sup>a</sup> which I have called *Tree Island*, from its being full of wood, and having a remarkable *single Tree*, on a *low Point* to the North; This *Island* seems to lay about SW and NE, a full League or one and a half League in length, <sup>b</sup> and rises, gradually, from the SW, to an *high Hill*, and declines to the North Eastward, much steeper; from the Northward runs a *low Point*, near  $\frac{1}{2}$  a mile, on which is a remarkable *single Tree*, seems standing in the water, From the SW *Point*, better than half way to the *Hill* on it, is a remarkable range of *high Trees*, <sup>c</sup> much above any of the rest: This *Island* lyes from the *Bluff Point* on the *Main* WbN $\frac{1}{4}$ N distant 8 Leagues; <sup>d</sup> The *Land*, from this *Point*, falls into *deep Bays*, both to the Northward and Southward; within this *Point*, and about East from it 1 mile, is another *Bluff Point*, and much like it; in working between this *Point* and *Tree Island*, as you gain near the *Point*, you have the water deeper, than a little to the Southward, having 21 fm, within 2 or 3 miles <sup>e</sup> of the shoar.

Before you bring the *Island* to the Westward of NW,  
you

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<sup>a</sup> Lat.  $18^{\circ} 8' N$ . It is about 8 leagues distant from the Main. *WA.*

<sup>b</sup> A league or four miles in length. *WA.*

<sup>c</sup> A long row of remarkable high Trees. *WA.*

<sup>d</sup> Immediately to the Northward of this *Point* is a *deep Bay*, in the bottom of which appears to be the *Entrance* of a *River*. *WA.*

<sup>e</sup> 3 miles. *WA.*



you may stand off to 36 and 38 fm, after *It* bears more Westerly, I judge you will shoal your water on it, at about 3 Leagues from the *Main*, you alter your *Soundings* from *soft mud* to *hard sand*, but no alteration in your depth of water, all the rest, excepting this half mile or mile, we found *soft ground*; along this shoar, are several *Islands*, the *Land*<sup>a</sup> on the *Continent* very mountainous: One remarkable *Island* in Lat. about  $18^{\circ} 14'$  N. it lyes near North and South, and is about  $1\frac{1}{2}$  mile in Length; at a distance, from the Southward, it makes like a *Point*, and there appears to be another *Island* within it, to the Eastward, where the *Land* falls into a *Bay*, from the *South Point* of the *first* of these *Islands* runs a *Reef of Rocks*, to the SSW, some above water, for above  $1\frac{1}{2}$  mile; we passed within about 2 or  $2\frac{1}{2}$  miles of *them*, when abreast of them had 20 fm. water; when to the Northward of these *Rocks*,<sup>b</sup> in that depth, we saw a small *Island* WbN $\frac{1}{2}$ N of us, distance 8 or 9 Leagues wide of this *Island*, which in the Drafts is called *Foul*

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<sup>a</sup> A little way in from the Sea, the *Land* is very *high* and *mountainous*, there is several small *Islands* close along shoar, One remarkable in Lat.  $18^{\circ} 24'$  N. *WA*.

<sup>b</sup> When to the Northward of these *Rocks* you may near the shoar in 16 fms water, when we were about a league to Northward of these *Rocks*, in that depth, we saw a small *Island* WbN $\frac{1}{2}$ N of us, about 8 or 9 leagues, we then tacked and stood off, with intent to go about 2 leagues wide of this *Island*, which in the French Drafts is called *Foul Island* (I. Sale) we lay up WbN till 12 o'Clock, when finding we shoaled our water on *hard sand*, came to  $\rightarrow$ , and found a strong southerly Current. *WA*.



*Foul* Island, we stood WbN, with light Breezes, about 6 Hours; when, finding we shoaled our water on *hard Sand* to 17 fm, came to  $\rightarrow$ : found a strong Southerly Current.

In the morning sounded, West from the Ship, very soon shoaled to 14 fm, and at about  $3\frac{1}{2}$  Miles from the ship, got on a *Reef* of *coral Rocks*, which seemed to lay near North and South, the water very clear, that, as we passed over some of them, there did not appear to be above 3 fm. water, tho' the least we had, in going over the *Reef*, was 7 fm. Judge the lead fell between *Rocks*, as there appears several *sandy spaces* between them; in less than  $\frac{1}{2}$  a cables length, to the Westward, had 10 fm, and then gradually encreased to 16 and 17 fm. *sand* When on this *Reef*,

The highest part of *Tree Island* SSE distant about 4 Leagues,

and on the *Main*, about East, are *two high Mountains*, or more properly *Rifings* on the *same Mountain*, and between which *two*, there is a small *Rifing*, and down on the shoar, are *two small Islands*, or what appear at that distance as such, making *two Gaps*, the *Rifing Hill*, between the *two Mountains*, appears directly over the *Southermost* of the *two Gaps*, when on the *reef*, and *Tree Island* SSE.

When in 17 fm. stood away, in the Boat, for the *Island*; kept the same depth, till brought the ship to bear EbN $\frac{1}{2}$ N, then stood directly for her; and no less than 13 fm, and

E

regular



regular soundings; we weighed and went through this Channel.

*Foul Island* bears from *Tree Island* - - NNW  $\frac{1}{4}$  W dist 8 or 9 Leas.  
And the *South End of Cheduba* - - NNW  $\frac{1}{2}$  W 13 Leagues. <sup>a</sup>

When out of this Channel presently deepened our water to 30 fm. mud.

The *Island* - - - SSE  $\frac{1}{2}$  E

In Lat.  $18^{\circ} 6' N$ , <sup>b</sup> or thereabouts, I judge is a good Channel, as, the day before, brought the *Island* to bear South, about 8 miles, and had no less than 21 fm. water, when the wind coming from the Sea, flood to the Eastward; To the Northward of *this*, about 3 Leagues from *Foul Island*, or rather nearer, <sup>c</sup> is a good Channel, when we, another time, went through, the Soundings pretty regular, the least water was  $12\frac{1}{2}$  fm.

*Foul Island* bearing - - NNW  $\frac{3}{4}$  W 7 or 8 Miles. <sup>d</sup>

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<sup>a</sup> 12 or 13 leagues. WA.

<sup>b</sup> Lat.  $18^{\circ} 17' N$  or  $18^{\circ} 18' N$ . WA.

<sup>c</sup> In Lat.  $18^{\circ} 25' N$ . WA.

<sup>d</sup> *Foul Island* lyes in about  $18^{\circ} 32' N$  and the *South End of Cheduba* in  $18^{\circ} 47' N$ . WA.

## INSTRUCTIONS



INSTRUCTIONS for sailing from *Pagoda Point*  
to *Ballasore Road*.

In the Months of *December* and *January*.

IN working out from *Pagoda Point* you bring *Diamond Island* to bear  $SE\frac{1}{2}E$ . or  $SEbE$ . and that will carry you clear of the *tail* of the *sand*, which stretches as far to the Northward as the *Northmost red Cliff* you see, and borrow no nearer the *Tail* of the *Sand* than 6 fm.

From *thence* to *Cape Negrais*, come no nearer than 12.

From *Cape Negrais* to the *Buffaloes* keep the same depth ; and then you may stand off to 25 and 30 fm, till you come up with the *Broken Island*, then you will have sight, of the *Calventura Rocks*.

From the *Broken Island* to *Calventura Rocks*, keep in 45 and 50 fm, which depth you will have close along side of the said *Rocks* ; but it will be necessary to keep a good Offing in the night, and frequently use the Lead and Line, as the *Currents*, in the BAY of BENGAL, are very deceitful, and often shift.

From *Calventura Rocks* you must work up as high as the *Island Cububb* ; it will be necessary to stand out to 50 fm, and in to 30, till you come with *Buynting Islands*.

When you get to the Northward of these *Islands*, you may stand in, to 15 fm. and off, to 40 fm, keeping in that depth, till you are in the Lat. of  $20^{\circ} 15' N$ .

Then



Then, if you find the wind favourable, you may quit the *Coast* steering WbN and WNW, which Course will keep you in 45 and 55 fm.

But if it should be calm, and you find the Current sets you out, you had best come to  $\rightarrow$ , and wait till you find the Current or Wind in your favour; but in case you should fall off to WbS, or WSW, it will be necessary to put about, and stand to the Northward; taking great care not to lose Soundings.

There is a *swatch*, about  $2^{\circ}$ . off the *Land*, where there is no soundings with 200 fms. line, which is about 2 or  $2\frac{1}{2}$  Miles, in some places; after you are over *That*, you will have Soundings upon *Sagor Sand* from 10 to 16 *hard sand*, then it will be necessary for you to keep from 12 to 20 fm; running along, in that depth, you will alter your Soundings from *hard sand* to *soft sticky mud*, which is the *Swatch* between *Sagor* and the *Eastern Sea Reef*; you will cross the *Tail* of the *Eastern Sea Reef*, where you will have Soundings from 10 to 12 fms. *hard sand*, but no Danger; for you will find all these soundings pretty smooth: then, from the *Eastern Sea Reef* to the *Western Sea Reef*, you'll fall into a *soft Channel* again, where it will be necessary to steer WNW and NWbW, and that course will carry you for the *sloops* in *Ballasore Road*. By observing your lead, you'll just find the *Tail* of the *Western Sea Reef*, in 10 or 12 fm, from thence you'll fall into 15, 20 or perhaps 22 fm. *soft ground*, and that is the Soundings of *Ballasore Road*; and from 15 to 13 fm. you will be sure to see the *sloops*.



September 1759.

( 25 )

Snow *Victoria*, Capt. *Walter Alves*, from BENGAL  
to NEGRAIS; and back to *Bengal*: 1759.

27. Lat. O 16°. 43' N; Mer. Dist. 6°. 23' E from *Jagranat*

Winds	Course	Dist.	Soundings
		K F	
WNW	- Ebs	- 16.1	At Midnight got Soundings
NWbW	- ESE	- 10.4	
W	- SEbE	- 7.4	At 2 A M $\rightarrow$ finding we
		9. - - 23 <i>soft</i>	shoaled our water fast
WSW	- SSE	- 3. - - 19	
		3. - - 14 $\rightarrow$	
At day light saw the Land			NNE
to several Rocky Islands, with Breakers, a good distance			SSW
off all round them			
And a Reef of Breakers at about 2' distance without.			
The N°. Extreme			N
distant from the Main about 3' or 4' and about 2' from			
The nearest Island which bears			Ebs

Where we lay is a kind of Bay, of about 2 miles deep  
and six in breadth, formed by the Rocks to the Southward,  
and a pretty high Island, which is the Extreme in sight to  
the Northward.

The North part of the Bay appears pretty clear of  
danger, but on the Southern part are Three Islands, and se-  
veral reefs of Rocks round them, on which the Sea breaks  
high: where we lay is good stiff mud; The Reef of  
Breakers, that lye off the North Extreme, are not without  
18 fms. water.

F

Lat.



September 1759.

( 26 )

Lat. A of this  $\phi \rightarrow$  place  $16^{\circ}. 23' N$ ; Mer. Dist.  $7^{\circ}. 7' E$   
from *Jagranat*.

29.

At  $\frac{1}{2}$  past 1 PM weighed, as the wind came round to  
the Southward, in order to get further off shoar.

Course WNW Soundings 14, 16, 18, 24

At 4  $\phi \rightarrow$  in 24 fms.

The Extremes - - - from  $NE\frac{1}{2}N$   
To the Southmost *Rocky Island*, and }  $SbE$   
The South Extreme in one

dist. off shoar 6 or 7 miles

At  $\odot$  rise weighed

Winds	Course	K. F	Soundings
SE	$SbW$	- 1.3	- 24
	$SSW$	- 5.	- 28.30
$SEbS$	$SWbS$	- 2.5	- 38
$SbE$	$SWbW$	- 3.	- 45
S	$ESE$	- 2.	- $\phi \rightarrow$ The weather so thick could not see the Land.

30.

October

I.

	Wind	Current
At $\phi \rightarrow$	$SbW$	- NNE Hard squalls and rain
		Extremes of the Land { NNE
		{ SSE 3 or 4 leas off shoar
At $\phi \rightarrow$	$SSW$	- NNE Lat $O 16^{\circ}. 34' N$

By the Observation to day, find we had a *strong*  
*Current* to the *Northward*, the day we made the *Land*.

At



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At 1 PM weighed

2.

	Wind	Course	K F	Soundings	
To ☉ set	WNW.NW	- SbW	- 8.1	- 30	At ☉ set the <i>Extremes</i> NE½N
					To <i>Cape Negrais</i> - SSE½S
					dist. off shoar 6 or 7 miles
To ☉ rise NW	- - -	SbW	- 9.2	- 30, 30, 30, 29, 28, 27, 26	
		SSW	- 1.	- 25	
		SWbS	- 1.3	- 25	
		SW½W	- 3.	- 24, 22, 21, 20, 20	At ☉ rise
To Noon	- - -	SW½W	- 1.	- 19½	The <i>Extremes</i> NEbN
		SWbS	- 2.	- 19, 20	To <i>Cape Negrais</i> SbE½E
		SbW	- 3.1	- 19, 17, 18½	6 Miles off shoar

At Noon Lat. O 16°. 16' N 18½ fms. 6 miles distant off shoar

The <i>Extremes</i>	- - -	NEbN
To <i>Cape Negrais</i>	- - -	SEbS 4 leas.

\* 4.

	Winds	Course	K F	Soundings
NNW	- S	- 8.5	- 17, 15, 14, 14, 13	
		SEbE	1.2	

Calm driving to the SE

Light airs, sometimes Calm, with fair weather

At ☉ set 13 fms.	The <i>Extremes</i>	- from	- NNE½E
	to <i>Pagoda Point</i>	- - -	SEbS
	<i>Cape Negrais</i>	- - -	ESE dist. 4 or 5 miles
At ☉ rise	- - -	<i>Cape Negrais</i>	- NbW
		<i>Pagoda Point</i>	- EbS 4'
		<i>Diamond Island</i>	- SSE½E

At 8 AM ↗ 9 fm, it being calm, and the *Flood Tide* athwart the *Harbour's Mouth* to the ESE

<i>Cape Negrais</i>	- - -	NNW½W
<i>Diamond Island</i>	- - -	SbE
<i>Flag Staff on Little Negrais</i>	- - -	NEbE
<i>Pagoda Point</i>	- - -	NbE 1'

At 4 PM weighed, with a breeze at WSW, and ran into the *Harbour*. Snow

\* So in the MS either the 2<sup>d</sup> or 4<sup>th</sup> probably should be 3<sup>d</sup>.



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Snow *Victoria* from NEGRAIS to BENGAL.

23.

At Noon Lat. O 16°. 5' N 11 fms *soft*

The <i>Extremes</i>	-	-	NbE½E
To <i>Pagoda Point</i>	-	-	SE Ey
Cape <i>Negrais</i>	-	-	NEbE 3' or 4'
<i>Diamond Island</i>	-	-	SSE½E

24.

	Winds	Course	K. F	Soundings
To ☉ fet	SEbS	NNW	3.	
	SbE	NbW	10.	
	SE	N	1.	30 fms. At ☉ fet abt 3 leas. off shoar
	SE to NE	NbW	1.3	30 The Ext. fr. C. <i>Negrais</i> . SbE½E to - - NNE

h. h.

7 to 3 Calm Head all round 38, 36

To ☉ rise NEbE - NbW - 1. - 37

SEbE - 2.3 - 32 At ☉ rise

The Extr. { SbE  
NEbN

An Island near  
which we → } E½dift  
when we first  
made the Land  
and from the Main 10' dift.

To Noon	NbW	-	4.	-	34
	ENE	-	SE	-	2.
	NEbE	-	SEbE	-	4. - 22, 17, 19
	E	-	NNE	-	1.2

At Noon Lat O 16°. 35' N

The Extr. - - - - - { SbW  
NE½N  
dift. off the *Island* mentioned in the Morning 3' or 4'

h.



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25.

h.	Winds	Course	K. F.	Soundings	
1.6	{ E to SE Calm }	- NNE	- 6.3	- 20.22	At ☉ set 3 leas. off shoar The Extr. from S½E to NEbN
7.9	SWbW	- NNE	- 6.3		
10.12.4	Calm				
5.	NE	- ESE	- 1.	- 27	{ At ☉ rise dist off shoar 4 leas The Extr. from SbE to NE Outermost of the Calventura Rocks N
6.	NEbE	- NbW	- 2.	- 30	
7.12	ENE	- N	- 9.2	- 30.32	
	ESE	- NE½N	- 7.	- 43.45	
					At Noon Lat. O 17°. 5' N 45 fm. <i>soft</i> The Extr. from SbE½E to NE½N The Calventuras ESE 3' dist.

When the *Calventuras* bore East, 1'½ distant, had 43 fm.

We have all the way from *Cape Negrals* found the Current sets about WNW.

26.

1.	- EbN	- NbE	- 2.3	- 47	At 1 PM finding we drove fast off shoar, ☐→ in 47 fm.
2.	(Current	W 1½K)			At 7 PM hove up ☐→ and let go the <i>Grapling</i> but drove out into 60 fm. before we could bring up
5.	- - -	(WNW 1½)			
6.	- - -	(NW 1½)			
AM					
2.	- - -	(N)			
3.	- - -	weighed ☐→			At 3 AM weighed ☐→
4.5	- ENE	- SE	- 3.5	- 47	
6.	- E	- SSE	- 2.	- 45	At ☉ rise the Ext fr SbE to NEbN Calventuras SE 2'

G

7.8



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7.8	E	NNE - 4.							
9.10		SSE - 6.	-	-	35				
11.	- EbN -	NbE 2.							
12.		SEbS - 1.	-	-	40	→			

Tacked and flood to the Northward, 'till 8 AM, when we flood in again towards the *Calventuras*; and, when within half a mile of them, we could see no danger, but what is seen at a distance, then had 35 *mud*, the *Outermost Calventura* bearing South, when tacked, and flood off.

At Noon, finding we drove fast to the Westward, → in 40 fm.

The Land - - - - - from NE  
To South Extr. and  
*Calventuras*, in one, - - - - - SbE  
distant off shoar 5 leas, and from *Calventura* 4'

27.

K F

(At → Current NW 0.5) Light Airs and sometimes calm; with fair weather and smooth water.

AM	Winds	Course		
4.	Weighed →			
5.6	- ENE -	SE - 4.	32	At ☉ rise 5 leas. off shoar 32 fm.
				The Exrs. fr. SbE to NE½N
				<i>Calventuras</i> SSW 3' dist.
7.		N - 2.	32	
8.	- EbN -	NbE 2.	35	
9.10		SEbS 4.5	25, 20	
11.		2.5	19, 19, 18, 17, 20, 19	
12.		NbE 2.4	20	



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At Noon

The Extr. - - - - - fr. S  
to NNE  
*Calventura Rocks* and Northmost *Island*  
within them, in one - - - NWbW[qu?SWbW]  
A *Point* that forms a *Bay*, - - - NE 3' dist. off shoar

AM, when we stood in shoar, went within a mile of the Northmost *Island* within the *Calventuras*, when nearest, it bore SSW, then had 17 fm. *soft ground*, but as we stood nearer the *Main* deepened to 20 fm.

There is a *Reef* of *Rocks* round this *Island*, running out about *half a mile* from *It*, but I believe there is no danger about the *Calventuras*, no *Rocks* under water, or any thing like a *Reef* or *Breakers* near them, for we stood within *half a mile* of them and saw nothing but the *High Rocks*, which may be seen 4 or 5 leagues, and had then 35 fm. *soft mud*.

We generally have a fine breeze at ENE and E from 4 AM to 2 or 3 PM, when it grows calm, and continues so, 'till Morning again.

28.

h.	Winds	Course	K. F	Soundings	
1.6	E	NNE	12.6	23, 23, 24, 25, 26, 27	{ At $\odot$ set $\rightarrow$ 27 <i>soft</i> <i>mud</i> 6' or 7' off shoar The Extr. fr. S to NbE <i>Outermost Cal-</i> <i>ventura</i> SWSy At Noon Lat. $017^{\circ}.18'N$ 28 fm. 6' or 7' off shoar The Extr. fr. S to NEbN <i>Calventuras</i> , just seen from deck, SWbS h.
		NNE	2.	30	
		SSE	4.3	26, 22	
		NNE $\frac{1}{2}$ E	10.5	25, 27, 28	



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29.

h. Winds Course K. F. Soundings  
1.3 - E - NNE 6.2 29, 30, 32

At 3 PM, driving fast off shoar,  
→ in 32 fm.

The Extr. fr. N  
to SbE

A Point of Land, which  
projects considerably } E 6' dist.  
without the rest

6 PM (Current)  
5 AM (SW 1 K)

Off this Point at a small  
distance lye two small Sandy  
Islands

10. - E - NNE 2. - 34  
11. - ENE N - 2.2 - 36  
12. - NE - SE - 1.3 - 38

At Noon, 3 or 4 leas off shoar  
The Extrs. fr. S½E  
to NbE

30.

ENE (Current SW 1½ K)

AM  
9. - SEbS - N - 5.5  
to  
12. - SEbE - NbE 12.2

At Noon Lat. O 17°. 43' N 5 leas. off shoar

The Extr. from NbE  
to SEbS

A Rock about the size  
of a Ship's Hull.  
with several small  
Rocks round it } SbE

when the Rock bore ENE, 1½ mile distant, founded 35

This Rock lyes about 6 leagues from the Main in the  
Lat. 17°. 36' N <sup>a</sup>

31.

SE - N - 13.  
NbW 5.  
N - 7.5

At ☉ set The Extrs. from SEbS

to North Ey 4 leas. dist.

Tree Island NWbW½W 4 leas.  
h.

<sup>a</sup> Called, in Mr. Hayters Instructions, Church Rock.



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h. Winds Course K. F. Soundings  
 6.12 SE,SSE NbW 14.4, 25 *soft* 25, 25, 23, 23, 23, 23  
 2. - - NW 4. 21, 21  $\phi \rightarrow$  At 2 AM  $\phi \rightarrow$  Tree Island W  
 (At  $\phi \rightarrow$  Current NW 1K)  
 ESE - NbW 2. 21  
 ESE,SSE NNW 10. 21.21 At Noon Lat. O  $18^{\circ}$ . 16' N 21 fm. *soft*  
 The Extrs from SEbS } 6' or 7' off shoar  
 to N $\frac{1}{2}$ E }  
 Tree Island SWbW 10' or 11'

What is called *Tree Island*, is in Lat. by my Observa-  
 tion about  $18^{\circ}$ . 10' N; *Its* distance from the *Main* about  
 6 leagues; *It* is pretty high and may be seen 8 leagues.

November

1.

h. Winds Course K. F. Soundings  
 1.3 - SbW - NWbN - 8.5 - 22 At 3 PM saw, from Fore Yard,  
*Cabob* NW  
 4. - - - 3. - 23  
 5.6 - S - - NW - - 5.5 - 21  
 7. - S }  
 12. - to } - - 19. - 21, 9 $\frac{1}{2}$ , 18, 17, 16, 15, 14, 13, 12 $\frac{1}{2}$ ,  
 2. - E } 12 *soft* 11 $\frac{1}{2}$  *hard*  
 3. NNW - 2. - 14 *soft*  $\phi \rightarrow$   
 4.5 (Current N 1K)  
 6.12 - E - NNW - 12.3 - 13, 12, 11 $\frac{1}{2}$ , 10, 10, 9 $\frac{1}{2}$ , 9, 9, 9, 9.

At  $\odot$  set 21 fm. distant from the *Main* 4 leagues

The Extr. - - - { from N $\frac{1}{2}$ E  
 to SEbS  
*Tree Island* - - - S  
*Cabob* - - - NW $\frac{1}{2}$ W 7 leagues distant  
 A small Island, with a few trees on *It*, to  
 the Southward of *Cabob* about 5 leagues distant } WbN $\frac{1}{2}$ N  
 from *It*  
 Also saw *Three Islands* between *Ca-* } from NW $\frac{1}{2}$ N  
*bob* and the *Main* } to NNW

H

The



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At ☉ rise, 13 fm. 6 leagues distant from the *Main*

The Extrs. all round to the Northward. - { from SW  
to SE  
South End of *Cabob* - - - - - W about 5 leas.

At Noon Lat. O 18°. 47' N

The Extrs. of *Cabob* - - - { from WSW  
to NNW 1/2 W  
A low *Island* to the Southward of *It*, - - - SSW 1/2 W

At this time we had a *High Island*, with a long reef of rocks all round it, and the *South End* of *Cabob*, in one; This *Island* is about four miles from *Cabob*, and from the *Islands*, that lye near the *Main*, about 10 or 12 miles; we were distant from *It* about 1 1/2 mile.

2.

h	Winds	Course	K F	Soundings
				<i>feet</i>
1.2	SSW	NWbN	4.6	9, 8, 7, 7, 6, 6
3.4		NW	5.	6, 6, 5 1/2, 5, 5, 5
5.	SW	NWbN	2.2	4 1/2, 4
6.	WbS		2.	4, 3 3/4, 4
7.			1.	4 1/2, 4 3/4 +>
10.11	SE, SSE	NNW	3.6	5, 6, 7, 8, 9, 10, 10
12.	SSW	NWbN	2.	8, 7, 6, 5

At ☉ set

The Extr. of *Cabob* - from S  
to WbN 1 1/2 distant  
The *Islands* within us- from SEbE } distant off shear 4' or 5'  
to NNW }

At



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At Noon Lat. O  $19^{\circ}.7' N$

The Extr. of *Cabob* - - - from  $W\frac{1}{4}S$  } 3' or 4' distant  
to  $S$  }

The *Islands* within us - - - from  $SEbS$  } 4' or 5' distant  
to  $NbW\frac{1}{2}W$  }

Where we had the *shoal-water*, at 6 PM, was off the NE Point of *Cabob*, from which runs a *Spit* about  $1\frac{1}{2}$  or 2 miles, we run over it, in the depth mentioned, but about mid-channel there is 8 fathom *soft*, for when at  $\rightarrow$  we sent and sounded.

By my Observation The *Island Cabob* extends from  $18^{\circ}.42' N$  to  $19^{\circ}.5' N$

3.

h	Winds	Course	K. F	Soundings
1.2	- SSW	- N	- 2.2	- 6 <i>soft</i> 7, 6, 5 $\rightarrow$
3.7	(Tide $ESE\frac{1}{2}K$ )			
8.	slack water			
	NbE	- NWbW	6.	- 6, 7, 7, 7, 7, 7, 7, 7, 7, 7
	Calm			6, 6, $6\frac{1}{4}$
	NNE	- NW	7.5	- 8, 8, $8\frac{1}{2}$ , 9, 9, 10, $10\frac{1}{2}$ , $10\frac{1}{2}$ , 11
6.	- ENE	- NNW	- 2.	- 12, 13, 14
7.8	Calm			
			4.	- 13, 13, $13\frac{1}{4}$ , 14
11.	$\rightarrow$ (Current $SSW\frac{1}{2}K$ )			

At 2 PM  $\rightarrow$  5

The Extr. of *Cabob* - - - from  $SbE$  } distant 5'  
to  $WSW$  }

The Extr. of the large *Island*, within it, from  $SEbE$  }  $1\frac{1}{2}$   
to  $NW\frac{1}{4}W$  }

At  $\odot$  rise

The Extr. of *Cabob* - - - from  $S$  } dist. 4 leagues  
to  $SSE$  }

The Extr. of the large *Island* within it, from  $ESE$  } 4 leagues  
to  $N$  }  
The



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At Noon Lat. O  $19^{\circ}$ .  $16'$  N  $\rightarrow 15\frac{1}{2}$

The Bearings much the same as At  $\odot$  rise.

4.

h.	Winds	Course	K F	Soundings
1. PM	} $\rightarrow$ (Current SSW)			
2. AM				
4.	ENE	NbW $\frac{1}{2}$ W	- 1.	
5.6	EbN	NbW	- 4.3	- $14\frac{1}{2}$ , 15, 15, 16, $17\frac{1}{2}$
7.11	ENE		7.6	- $17\frac{1}{2}$ , $17\frac{1}{2}$ , $17\frac{1}{2}$ , $17\frac{1}{2}$ , 17, $\rightarrow$
12.	Calm			

At  $\odot$  rise 17 fm. *stiff mud*

The Extr. of <i>Cabob</i>	.	-	from	SbE	} 7 leagues distant
			to	SSE $\frac{1}{2}$ E	
The <i>Ilands</i> within us	-	-	from	SEbE	} 3 or 4 leagues
			to	N	

At Noon Lat. O  $19^{\circ}$ .  $25'$  N.

The Extr. of the *Ilands* within us much the same as at  $\odot$  rise.

The *Main*, in sight between the *Ilands*, - - - NbE

*Cabob*, just seen from deck, - - - SSE

distant from the *Iland*, abreast of us, about 7 miles.

5.

h.	Winds	Course	K. F.	Soundings
2.	WbN	NbW	- 1.	
3.4	WNW	N	- 2.	
5.	Calm			$\rightarrow 14\frac{1}{2}$ At 5 PM

The *Ilands* within us fr. SE  
to N  $\frac{1}{2}$  W  
distant from the nearest  
about 5 or 6 miles

7.



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5.

h.	Winds	Course	K F	Soundings
7.	- E -	NNW -	2. -	15
8.	- ESE -	- -	3.3 -	15
9.	- - -	NWbW -	5. -	19
10.	- SE -	WbN -	5.	Saw <i>Rocks</i> close to us WNW
11.	- - -	SW -	2.4 -	13
12.	- - -	WNW -	2. -	15
1.3	- - -	- - -	8.5 -	21, 21, 22, 24
4.	- Calm -	Head NW -	- -	24
5.6	- E.S.E.	WNW -	4. -	28
7.8	- - -	NW -	6.2 -	28, 28
9.12	- EbS -	NWbW -	11 -	28, 30, 32, 33

At 10 PM saw *Rocks*, almost even with the water's edge and *Breakers* on them, within two cables length of us, bearing WNW; immediately hauled up SSW and before we had braced the Yards up were so near them, that I could have jumped from our quarter on them, so that if they had not been steep to, we must unavoidably have been lost; what is above water of these *Rocks* is not bigger or higher than a *Jolly-boat*; and, as it was smooth water, not much *Breach*; They are not above 30 yards in length, and are not to be seen till very near; when we had trimmed the sails, founded and had 13 fms. *soft*.

They bear from the North End of *Cabob* about NNW  $\frac{1}{2}$  W about 11 leagues and lye in Lat.  $19^{\circ} 36' N$ .

At  $\odot$  rise The Extr. of the *Islands* } from N } 5 leas. dist.  
to the Southward of *Aracan River* } to E

At Noon Lat.  $0 19^{\circ} 57' N$

The Extr. of the *above* - - - from  $E \frac{1}{2} S$  } dist. 6 leas.  
to  $NE \frac{1}{2} E$

Then the *Point of Land*, which forms the } N  $\frac{1}{2}$  E 7 leas.  
*River's mouth* to the Northward

I

h.



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6.

h.	Winds	Courfe	K. F.	Soundings.
1.	ESE	NWbW	3.	33 fms.
2.	-	WNW	3.	
3.	SE	W	3.2	
4.	SSE	-	3.	45
5.6	-	WbN	6.3	
7.8.	-	-	6.6	38
9.11.	-	-	11.	40
12.	S	-	4.	
1.	SSE	NNW	3.	$\frac{60}{60}$
2.4.	S	N	5.6	65 Sand and Ouzes
5.	SE	-	2.	
6.	-	NNW	2.3	56 ditto
7.	-	-	3.3	
8.	-	NW	3.3	52 ditto with Shells
9.10	-	NW	7.2	50 mud
11.12	-	-	7.	46 ditto

At  $\odot$  fet

The Islands to the Southward of Aracan River's

*moutb* bore

ENy

The Land to the Northward of It from to

NNE

NE

} dist. 8 or 9 leas.

I take my Departure from the North Point of the Mouth of Aracan River, allowing it to lye in Lat.  $20^{\circ} 20' N$ .

At Noon Lat. A  $20^{\circ} 36' N$ ; Mer. Dist. from North Point of Aracan River  $1^{\circ} 33' W$

Course and Distance, Bearings included, N  $76^{\circ} W 65'$   
D. Lat.  $16'$  Dep.  $63'$

h.



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7.

h.	Winds	Courfe	K. F.	Soundings.
1.2	ESE	NW	3.	43 mud
3.4	-	-	6.5	42 ditto
5.6	-	-	6.	42 ditto
7.8	SE	-	4.	45 ditto
9.10	-	-	4.2	45 ditto
11.12	-	-	4.	45 ditto
1.2	-	-	4.	43 ditto
3.	-	-	2.	-
4.	-	NWbW	2.	32 ditto
5.	SSE	WbN	3.	31 ditto
6.	S	WbS	2.	31 ditto
7.	Var.	WbN	1.3	34 ditto
8.	SSE	W	2.	34 ditto
9.	-	WbS	2.	-
10.12	SbE	WSW	8.3	42 ditto

At 8 AM. from Mast-head saw a  
dry sand bank bearing N7' or 8'.

At Noon Lat. A 21°. 5' N; Mer. Dist. 1°. 46' W;

Course and Distance NWbW 52' DLat. 29' Dep. 43'

Course Dist. DLat. Dep. Latitude M.D. Soundings

8.

W - 50 - - 50 - 21°. 5' N °. / 2°. 36' W 45, 45, 45, 45, 45, 50, 50,  
50, 50, 50, 60

9.

WSW 23 - 9. - 21 - - 20.56 2.57 At 6 PM → 50.9 PM to Noon →  
Current SW 3½ K per hour

10.

h.	Winds	Courfe	K.F.	Soundings
2.3	NWbW	NNE	4.5	-
4.5	NNW	NE	3.3	At 5 PM →
				The whole Time at → Current WSW
				4 K per hour
				At ☉ rise weighed

AM

7.	NNE	NW	10.3	40, 35, 32, 32, 30, 28, 27, 24, 23, 21, 20
10	-	-	-	fine mud
12.	-	WNW	1.5	-
	-	W	3.	21, 21

At Noon Lat. O 21°. 4' N; MD 3°. 34' W

Course and Dist. N 85°. W 37' DLat. 3'. Dep. 37'

h.



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II.

h.	Winds	Course	K.F.	Soundings
1.2	N	WbN	5.2	24 fms.
3.4	NNW	W	4.6	24 Coarse mud and broken shells 24
5.6	N	WbN	6.	23 Sand and broken shells, 22 sand ouze and broken shells
7.	NNE	W	3.	
8.	NE	W $\frac{1}{2}$ S	2.3	19 $\frac{1}{2}$ black sand and shells
9.	-	WbS $\frac{1}{2}$ S	3.	18. 18. Sand ouze and broken shells
10.12.1	NNE	WSW	12.	18, 18, 18, 18, 17 $\frac{1}{2}$ , 17 ditto 16, 15 mud and sand
2.	-	WbS	3.	15, 14 mud and sand
3.	-	W	3.	11, 10, ditto
4.	-	WbN	3.3	9, 8, ditto $\rightarrow$ At 4 AM $\rightarrow$ 8

At day light saw the Nelly Green Hills - NWbN

The Low Land from NWbW $\frac{1}{2}$ W

to SbW 6' or 7' off shoar

Course and Dist. WbS 46'. DLat. 9'. Dep. 45'

Lat. A 20°. 55' N; M.D. 4°. 19' W from North Point of Aracan River.

Pilot



Pilot *Alexander Wood's* letter To the Honorable  
*Thomas Braddyll*, Esq; President and Go-  
 vernor, &c. Council of *Fort William*.

Honorable Sir and Sirs


I Take the Liberty to present your Honor &c. with a  
 Draft of the Coast of *Arracan* and *Pegu*, and my Re-  
 marks and Observations thereon, which are as follows

When we arrived at the *Sambleton Island*, going into  
*Arracan River*, we met with a Current setting SSW 3  
 Knots, there lyes *five* or *six broken Islands* from the SE to  
 the East, from the opening into the River *Arracan*. The  
*Cabobs* is a large Island, the Body laying in the Latitude  
 of  $18^{\circ}.45'$ ; there is a *small Round hummock* at the South  
 End, and several other *Broken Islands*, where Capt. *Harpur*  
 lay the SW Monsoon in the ship *Bristol*: They must  
 be careful of the Inhabitants of the *Island*, not to trust  
 them too far, for Capt. *Burry*, in a French ship, had his  
 1<sup>st</sup> and 2<sup>d</sup> Mates and nine Lascars cut off by these same  
 Inhabitants in November 1737; about 10 or 12 Leagues to  
 the SSE lyes a *Parcel of Broken Rocks*, there is one at a  
 Distance makes like a sloop, the rest being even with the  
 Waters Edge, being 16 fathom close to them; there are  
*many Rocks* and *small Islands* all along the *Coast* to *Negrais*,  
 [Especially the *Buffaloes*, being *seven* in Number, are the  
 most remarkable;\*] going betwixt *Diamond Island* and the

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*Alguadoes*,

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\* This is certainly misplaced in the original, coming in at the end of the Pa-  
 ragraph. 



*Alguadoes*, when *Diamond Island* is NNE $\frac{1}{2}$ E dist. about 2 miles, then you have 4 Fathom *hard Ground Rocks*, distant from the Island about 2 miles.

I shall say nothing about the *Harbour* of the *Negrais*, seeing there is a good account of it in the *Coasting Pilot*;

When you draw near to *Pegu River* you will have the *Tides* sett from  $2\frac{1}{2}$  to 3 Knots, setting NE; as you come up with the *Bar*, you deepen your water 1 fathom more than there is any where else: If your misfortune is to fall to the Eastward of the *Bar*, you will have shoal Water, fine black sand, with the *Tides* setting NbE and SbW  $4\frac{1}{2}$  Knots; Water falling here 18 or 20 foot

I am with Greatest Respect

Honorable Sir and Sirs

Your most Obedient Humble Servant

(Signed)

ALEX. WOOD

Calcutta, 6th February  
1740-1

INSTRUCTIONS



INSTRUCTIONS for the COAST of CHITTAGONG  
by Mr. Bartholemew Plaisted.

ALL Ships in the SW monsoon, coming from the Seaward, ought to make the Coast to the *Southward* of *Red Crab Island*, about the Lat. of  $21^{\circ}.15'$  or  $21^{\circ}.20'N$ ; but nothing farther to the Northward; this I recommend on two accounts, 1<sup>st</sup> it appears to me to be a bold shoar, clear of any shoals, for any thing I have observed, and gradual soundings to 3 fathoms at the distance of *half a mile* from the shoar. 2<sup>dly</sup> Close to the beach is a range of *rocks* and *Sandy Cliffs*,<sup>a</sup> that make it very remarkable, but more especially when the Sun is to the Westward, when they will appear very white; but, in the morning, the shade gives them a different complexion; and in the Country is *high land*, and a remarkable *hill*, like a *Sugar loaf*, is put in the *Draught*; add to this, that in the months of June, July, August and September, the continual rains for days together, make observations of the Latitude more rare, and the danger greater

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<sup>a</sup> Between the 3d and 4th of the *Sandy Cliffs*, counting from the *Northward*, is a small run of *fresh water*, a hint of this kind may be deemed necessary, as Ships have been *three* months in their passage from *Madras* to the *Bay*, and this *Eastern shoar* is the proper track.



greater of falling in with the Coast, which is then a *lee shoar*; there will be less risk in falling in here, than further to the Northward; but if a Ship has already got Soundings, [on any of the *Sands*] \* to the Northward, and wants to bear away for *Chittagong*, there is no necessity to run to the Southward, in the months of October and November, but endeavour to make the land between *Norman's Point* and *Angor Colley*.

All Vessels from *Bengal*, should follow these rules if possible, but if driven to the Southward, must work along shoar, for the benefit of the Floods.

Cruze Cool.

Coasting this shoar in 7 fathoms, to the Northward of the *Cliffs* appears a large bay, which is called *Cruze Cool*, and there is a considerable river falls into it, called *Mush Colley*, I took extraordinary pains in examining this place, in hopes of finding a harbour, but at last must conclude there is no entrance for any vessel of burthen; the soundings I found here, are justly laid down in the *Draught* and the chain of breakers that incloses it, makes me apt to think that none would venture in, even should a channel hereafter be found amongst them, for the Long boats, on the Survey, were obliged to go in, to the Northward of *Red Crab Island*.

Before

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\* Not in Copy at India House.



Before the Northmost of the *Cliffs* is about EbN, from the mast head, you ought to look out well for *Red Crab* Island and the *Breakers* off it, which are easily to be perceived in day light, and consequently avoided; but the *soundings* about them are so irregular, that in the night it is better to keep out into 15 fathoms, and on any sudden shoaling stand off again, for here is 5 and 6 fathoms almost close to the *breakers*.

**Red Crab Island.** *Red Crab* Island is easily known, by its bearing from *Cruze Cool*, and it being a white *sand* with a few green shrubs on it.

**Dangerous Shoal.** Being passed *Red Crab* Island, it behoves you to keep a look out for a very *dangerous shoal*; which, at high water and little wind, may not be perceived otherwise than by the lead; its situation with the *South end* of *Kuttubdea* and *Curria River* I have carefully laid down, and are the chief marks by which to avoid it, and the *soundings* about it in the Draught shew what depth of water there is near it, but the above bearings may be relied on.

**Sand off Kuttubdea.** From hence to the Northward, there appears to be no danger along *Kuttubdea*, provided you keep about 4 or 5 miles off shoar, nearer in there is a *sand* laid down in the Draught, and within it is 7 fathom.

**Kuttubdea.** *Kuttubdea* is a woody Island, and has no people living on it, but a few fishermen: from *Pilote Cotta* to the  
L South



*South End*, there is fresh water where I have expressed, and here are the most Fishermen.

Uckoia Passage.

The *inner passage*, called by the natives *Uckoia*, is a very safe passage; but, I believe, will be hardly ventured on by strangers, though I would undertake to carry the biggest ship in the navy through, and as it affords good shelter in the SW monsoon, I shall give the best Instructions my own experience has furnished, leaving others to make use of them as their own prudence may direct them.

*Red Crab Island* is the best to take your departure from, and coming from the *sea*, stand in between the *shoal* and the *Island*, \* but nearest to *Red Crab Island*, at the distance of about 2 miles, keep a look out for the *point*, a little above *Curria River*, which may be known by some *Trees* resembling *Bamboo Bushes*, steer in for it, but not to approach the *Eastern shoar* too much, on account of the *shoal* that is off it, as soon as you perceive the *South End* of *Kuttubdea*, which is known by the same kind of *Trees* exactly, keep it due *North*, till you have the *passage* fairly open, then you may steer in, without fear, taking care to keep  $\frac{2}{3}$  of the *passage* to the *Eastward*, and thence forward range along *Kuttubdea*, in between 4 and 5 fathoms, and all along is good  $\rightarrow$  in *soft ground* and *no shoals*: but on the opposite

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\* N. B. In the Draught is another *shoal*, nearer *Red Crab Island*, of which the Instructions take no notice.





opposite of *Sunwa* and *Urantania*, the shoals run very far out, and without them deep water; I have marked three Creeks on *Kuttubdea*, the first called *Kukera banfira*.

*Kukera Hanfira*.

*Kukera Hanfira* i. e. a Dog swimming, Creek I have been up as far as I have traced it, and small vessels, drawing not above 10 feet water, may find a safe harbour in it.

*Pilote Cotta Creek*.

The next Creek called *Pilote Cotta Creek* \* (from a pilot murdered here by the Muggs) runs through the Island and has various soundings, from 1 to 7 fathoms, just within the *Eastern mouth* a ship may lye safe in 7 fms, and with the proper time of *Tide*, a vessel drawing only 10 feet water, may go quite through it, I had 5 feet on the bar at the *Western mouth*.

3<sup>d</sup> Creek.

The other Creek to the northward of *Pilote Cotta* I have been up as far as it is traced in the Draught, but its not worth further notice.

*Chutta Sanway*.

Being passed *Chutta Sanway* you may venture over to that shoar, if you chuse it, but *mid-channel* is now the best, at the upper end is a small river, not above a cables length over, called *Kentlaw*, which about half a mile in, divides itself; one part runs up to *Fulkuddar* and the other called *Khaut-Colly*, turning away to the NW, comes out again to the sea; the first entrance at *Kentlaw* is a very safe

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\* A Question arises whether the Name is *Pilote Colley* i. e. Creek, or *Cotta* the Pilot's Name the addition of *Creek* here seems to imply the last. *Q*



safe *barbour*, but there is no entering at the other end, I worked through it, hank for hank, with the two long boats, and did not find *one shoal* in it, the SW side having generally 4 fathoms and the NE shoar 7 fathoms, and [the breadth \* ] about a Cables length throughout.

*Kant Colly.*

As a hundred ships may lye in it safely, it is necessary to say something more of a place that may be of more general use hereafter, and have accordingly added a large draught of the river, as I worked through.

At the mouth of *Kenzlaw* is a *shoal*, on each side, that at low water both together almost take up half the width, and yet at *low water* I would prefer to enter it, because they then discover themselves, and make the opening clear before your eyes; having brought the *river* open NEbE, look out for the point A, at the upper end, that divides the two rivers, and just keep it open, one third of the river, with the Starboard side, and you may steer in, without fear: just in the middle between the two *shoals* is 9 and 10 fathoms, but being entered is 6 fm, then haul up for the larboard shoar directly; afterwards you may  $\phi \rightarrow$  where you please, but the further in, is the safest in the SW Monsoon, but  $\phi \rightarrow$  where I have marked it, will give you a fine visto of *Julkuddar river*, which yields a pleasant appearance, up at *Julkuddar Kella* is *water*, and the



the situation of this *harbour* is such, that it communicates with *Choicoria* and *Ramoo*, without the Boats going to *sea*, or entering *Uckoia passage*.

Ships coming from the Northward will, of consequence, enter the *Uckoia Passage* to the Northward, and being turned *Cuckolds Point*, after bringing it NW, may venture to keep up the shoar, close on board, they will have 7 fathoms, at low water, or half tide, the *bank* will guide them; but on *spring tides* it is *overflowed*; and then it will be necessary to have a care lest you get on it.

To enter *Uckoia Passage*  
coming from the North-  
ward

In coming from the Northward to enter the *Uckoia passage*, the *Serrole Coast* must not be approached too near, for it is *shoal*, and you must give a birth to *Cuckolds point*, till you have brought it NW, but not too much, for fear of the *sand* to the *Westward* and that off the North end of *Kuttubdea*. Ships likewise, who from the Southward have gone without *Kuttubdea*, must be on their guard, and keep the lead going, for fear of this *shoal*, which bears from *Cuckolds Point* WNW $\frac{1}{2}$ W, but notwithstanding I have laid down the *shoals*, with proper caution and exactness, prudence will dictate, that while you are entering the *North end* of *Uckoia passage*, it is better to have a boat on each bow, till you have rounded the *point*, and brought it to bear NW, and then there is nothing to fear.

Having given the *Serrole* shoar a proper birth, it is necessary [in going to the Northward \*] to look out for

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\* Not in Copy at India House.



shoals of *Anghor Colley*, which are *dry* at low water, and no way dangerous, with your eyes open and the lead kept going.

*Goirab Coast.* From *Anghor Colley* to *Normans Point* [which is the South point of *Chittagong River's* mouth] \* there is no danger in the least, but regular soundings; two miles to the Northward of *Anghor Colley*, are some Fishermens huts, where those who are unacquainted with *Chittagong River* may get a pilot, but after all, it won't be prudent to let him bring you higher than the *Bunder*.

To know *Chittagong River* Coming from the Southward *Chittagong River* may be easily known from the following remarks.

*Kittafol Tree.* Between *Kuttubdea* and *Anghor Colley*, is mostly woody; being past *Anghor Colley*, between it and *Normans Point*, it is a white sandy soil, and few trees near the shoar; next, between *Kuttubdea* and *Anghor Colley* guide your eyes along the Coast, to the Northward, and you will see on a *hill*, near *Normans point*, but more inland, a remarkable *spreading tree*, which for that reason, is called *Kittafol tree* in the Draught; at a distance you may see the *tree*, as rising out of the water, before the *hill* is perceived.

Another mark is, that at *Normans point* the *Colours* are hoisted, and may be seen with a glass 2 or 3 Leagues off,

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\* Not in Copy at India House.



off, but as this is a mark that may be changed, or not hoisted, and the *Kittasol Tree* farther seen, the last is the most to be relied on.

If to the Northward.

But as it may happen that a vessell may overshoot the *Rivers Mouth*, and get up between *Chittagong* and *Sundee*, it will be necessary to say something how to rectifie such a *Mistake* when committed.

1<sup>st</sup>. If you are high up, a Man, from the Main Top, may easily see *Sundee*, which alone may guide you, by referring to the Draught: and *Latticone*, \* in a clear day, may be seen as far to the Southward as *Anghor Colley*, for it is the largest *Hill* of all that *Range*, to the Northward of *Chittagong*; and the whole *Range* is continued to *Shaw Brush*, in appearance; having found out your error, you may venture to coast it, by your Lead, back; only keeping something farther off as you approach to the *River's Mouth*; and being come opposite *Cautwallea*, which is known by a *small point* to the Northward, look in for the *Range* of *Hills* inland, and you will see a *Hill*, when in one with *Cautwallea Creek*, bearing EbS on which is a *Tree*, something like the *Kittasol Tree*, and not to confound things, shall call this *Umbrella Tree*, to the Southward of which you will see *Shaw Brush*, which appears to have *three Trees* on it, the one really stands on another *Hill* near it.

*Instructions*

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\* Called Sette Kone in the Draught.



*Instructions for Chittagong River.*

Chittagong River.

To enter the River of *Chittagong*, being out in the Offing, keep *Kittasol Tree*, by *Normans Point*,  $EbN\frac{1}{2}N$  and steer right in for it, taking care, that the flood don't hoist you to the Northward, which the bearings of the *above Tree* will inform you of; being come near *Normans Point*, give it a *small Birth*, and when you have entered in and come up with the *high Banks* (for *Normans Point's* a *low Beach*) you have nothing to fear, for you'll have deep Water all along the starboard shoar, within two thirds of a Cables length, and by this you will avoid the *Middle ground*; but be sure you  $\rightarrow$  before you come to the *Kella*, half a mile short, if you intend to go no higher; for to go higher requires some further consideration.

If I was to carry a ship, in the SW Monsoon, I would hardly venture to cross with a *flood* tide, but rather chuse the latter part of the *Ebb*, taking care to have enough of it till over, for till you are arrived over and shut in the other part, a SW or WSW Wind, with a flood tide, must naturally horse you on the *sand* to the Northward of the *Channel* or *Crossing place*; and it will be necessary to keep the *North point* of the *Middle Ground* as close on board as the depth your ship draws will admit, and if you was to range the *Middle Ground*, which has *regular soundings*, instead of keeping the shoar so close on board, it will be still better as you will have the less distance to cross over, and you may depend on 9 fathom in crossing, if you have a  
less



less cast, it will be by bordering too near the *North Point* of the *Middle Ground*; having got over to the other side, keep it close on board, never venturing above half a Cables length off, and you will have 6 7 and 8 fathoms, till you are up with the *first Creek*, afterwards you are to expect no more than 3, with a flowing tide; being come up with *Koufnagar*, half a mile further a head, is the proper place for you to  $\rightarrow$ , as close in shoar as you can conveniently, for by this you will be more out of the way of the Tide that runs here with great force; here commences the first part of *Chittagong town*, which is called *Fringbey-Buzar*, being inhabited mostly by the Christians, and as this is the place we have chose for the building of Craft, it is here that assistance is most at hand, but if a vessel is desirous of going higher up, she may: but East from *Shaw Brush Hill*, in the narrow, is a very strong Eddy, and some *uneven Ground hard*, at the upper End is a *small Creek*, that a ship may be laid on shoar in, to repair, being more out of the way of the Wind and Tide than below.

**Sundeeep.** *Sundeeep* is an *Island* of large extent, and with a good Government, might be made a place of Consequence; it is fertile and abounds with Cattle, and has this advantage of the neighbouring Continent, that there is no considerable Wild Beast of Destruction, as Elephants Rhinoceros or Tygers; Jackalls and wild Hogs, indeed



there is enough, its situation with the *Coast of Chittagong*, and being at the Mouth of the *Great River*, that goes to *Dacca*, gives it a preference in my opinion, for a Trade by Shipping, I have coasted it all round, and excepting the *North part* facing *Babnee*, find no danger; but by adverting to the Draught may be avoided, but cannot say much in favour of the *Passage* between *Babnee* and *Sundee*, for there are many *small Sands* yet undiscovered for want of time, the draught of water I have had are set down in the Draught, to save repetition. On the West side is a remarkable *Tree* called *Dolio Goss* (or Tree) by the Natives and is a very distinguishing Mark to know where the *City* is, which is further known by a large *Grove of Palm Trees*, for it stands a mile *in-land*.

*Sittall Creek.*

To the Southward of the *City*, is a Creek, or *River*, called *Sittall*, that a Ship of any Burthen may go into, and have 4 fm. at low water, about a Mile in, is the proper place to  $\rightarrow$ , where you may lye safe in any Monsoon: but there is some difficulty in getting in, because the *flood* setts strong to the Northward, *without*, and before you can haul up, in the SW Monsoon, round the *Shoal*, you will be set on the *other point*, the reach, in entering, lying SE, making the Wind scant; you must therefore be obliged to wait the proper time of Tide; which is the last of the Ebb, and then the Flood will set you wholly in.

All



All along the *West Side* of *Sundee*, which I have coasted up and down, and have yet discovered no other danger, than what I have laid down, and indeed it has been a general observation of mine, that where the *Course* of the *Tide* has run *N and S*, that the *Channel* has been the *clearest* of *Shoals*; but the reverse, when they begin to run *E and W*; I except, out of this observation, the *Creeks* that connect two *great Rivers*, which generally are *clearer* of *shoals* than any.

*Bank W. from Kuttubdea.*

One thing I have to add, that *West* from *Kuttubdea* is said to be a *Bank of Sand* of a quarter of a mile broad, which information I have from a Dutch Captain, that was forced in here, and therefore believed it best, to put it in my Draught, though I have not yet been on it, that People may be on their guard; between *it* and the *NW point* of *Kuttubdea*, he says, he had from 15 to 7 fathom *soft Ground*; Its distance from *Kuttubdea*, by his account, is 16 English Miles, he had on it 5 fathom.

The Latitudes in this Draft are the result of observations made with 3 different Quadrants, for more exactness, repeated 6 different times (up and down) and the medium taken, worked by the *Declination corrected*, not such as is generally in our Calenders, which are often, when the Sun is near the Equinox, almost 3 minutes erroneous;

because



because as the same declination is made in those Books to serve for 16 years together, it is evident that if they are calculated for the first year, expressed by the Table for the last, there must be a variation of that Quantity. Hodgson in his *System of the Mathematicks*, Crosby and some others give you *Tables* of this *Variation* for 100 years, and yet the *Mariners Compass Rectified*, and *Callender* seem to be the only Books used, and these errors still continue where they might be rectified with ease.

It is a known thing that the *Refraction* occasions a difference in the *Altitude* taken, and without it is corrected, that an observation made off *Chittagong* in July, would differ from one made in *December*, one minute; and at the *Equinox* half that Quantity; but the most considerable error arises from this; that the Table in all English Books is calculated from the *Meridian* of *London*, and in the French Books for the *Meridian* of *Ferro*; and that we are  $90^{\circ}$  to the Eastward of *London*, which, about the *Equinox*, occasions a difference of near 6 Minutes, to be added or subtracted, according to different circumstances, and which most of our Books caution Navigators of, yet is rarely attended to, and admitting this variation to fall all one way, it is apparent to any who reflects, but a little, that if the *Altitude* of the sun was taken never so true, an error in the *Latitude* of  $9'$  must follow of course.

Without



( 53 )

Without meaning to dive into our present practice of Navigation to make these remarks, as my Draught is on a large Scale, and 5 or 6 Minutes difference of Latitude, by erroneous Calculation, may make one, unacquainted with the Coast, judge himself where he is not.

(Signed) BARTH. PLAISTED.

Chittagong, 1<sup>st</sup> January,  
1762

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*Directions*



*Directions for entering the River of CHITTAGONG  
OR ISLAMABAD by John Ritchie.*

“ THE South point of the entrance called *Nomans*  
 “ or *Norman's Point* has a flat projecting from it  
 “ to the SW but is steep towards the *River*, the Channel  
 “ of which runs close by the southern Bank, and then out  
 “ to Sea in a SW direction, therefore to enter the *River*  
 “ bring the steep or North side of *Norman's Point* to the  
 “ Eastward of NE, so as to open the Bank of the *River*  
 “ within it, and steer directly in NE and along the Sou-  
 “ thern shoar at 30 or 40 fms distance; and when past  
 “ 2 little Creeks in the *Bunder Green*, drop an  $\rightarrow$  under  
 “ foot, for there is not room to throw a Vessell to there,  
 “ if it blows fresh, the Channel being not above a Cables  
 “ length over, and for this reason they must moor imme-  
 “ diately, there is a *Clump* of Trees at the foot of the  
 “ *Bunder Hill* and close to the River; the  $\rightarrow$  place is  $\frac{1}{2}$   
 “ a mile below this Clump; and opposite to it the Chan-  
 “ nel of the River runs towards the opposite Bank.  
 “ From the  $\rightarrow$  Place *Shabrooge* bears N.

“ In the SW Monsoon the *Bar* of this *River* looks  
 “ frightful, as the sea breaks over it in most Places, and  
 “ on the North side of the entrance there is a *Cluster* of  
 “ Sands which dry at half ebb.

“ It is high water on the bar, at 1 o'Clock full and  
 “ change; and the best time to enter the *River* is at high  
 “ water



“*water slack* : The *Flood* sweeps so rapidly athwart the  
“ Entrance of the River, that it is dangerous to attempt  
“ going in while it is making, especially if the vessell  
“ steers the least wild. Next to *high water slack* the best  
“ time is when the *Ebb* has begun to make, but then there  
“ is a risque of being drove on the *Flat* of *Nomans Point* ;  
“ the best Track over the *Bar* hath more than 4 fathom  
“ at *high water*, and in drawing near the *River Bank*, it  
“ deepens to 5, 6 and 7 fathoms.



"water bank: The flood sweeps so rapidly against the  
"entrance of the River, that it is dangerous to attempt  
"going in while it is making, especially if the vessel  
"floats the least wild. Next to high water, the best  
"time is when the tide has begun to make, but then there  
"is a risk of being drove on the bar of Newmarket Point;  
"the best track over the bar is not more than 4 fathoms  
"at high water, and in drawing near the lower bar, it  
"deepens to 5, 6 and 7 fathoms.



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